

## E Elektronischer Anhang

### E 1. Molekularbiologischer Effektornachweis in verschiedenen Pathotypen von *S. endobioticum*

**Tabelle E1: Zusammenfassung der PCR-Amplifikationen zum molekularbiologischen Nachweis der Effektorsequenzen in den Pathotypen 1, 2, 6 und 18 von *S. endobioticum*.** ✓: Effektoramplifikation, -: keine Amplifikation, ?: unklare Amplifikation, Tk: 'Tomensa' Kontrolle cDNA, T DNA: 'Tomensa' gDNA.

Nr.	Effektor	1. biol. Wiederholung						Bemerkung	2. biol. Wiederholung						Bemerkung	3. biol. Wiederholung						
		P18	P1	P2	P6	Tk	T DNA		P18	P1	P2	P6	Tk	T DNA		P18	P1	P2	P6	Tk	T DNA	Bemerkung
1	158	✓	✓	-	✓	-			✓	✓	✓	✓	-	-		✓	-	✓	✓	-	-	
2	17586	✓	✓	-	-	-	Zusatz- banden P1, P18		✓	✓	✓	✓	-	-		✓	-	✓	✓	-	-	
3	5544	✓	✓	-	✓	-			✓	✓	✓	✓	-	-		✓	-	✓	✓	-	-	
4	13241	✓	✓	-	✓	-			✓	✓	✓	✓	-	-		✓	-	✓	✓	-	-	
5	15923	✓	✓	-	✓	-			✓	✓	-	✓	-	-		-	-	✓	✓	-	-	
6	9742	✓	✓	-	✓	-			✓	✓	✓	✓	-	-		✓	-	✓	✓	-	-	
7	13808	✓	✓	-	✓	-			✓	✓	✓	✓	-	-		✓	-	✓	✓	-	-	
8	15704	✓	✓	-	✓	-			✓	✓	✓	✓	-	-		✓	-	✓	✓	-	-	
9	3998	✓	✓	✓	✓				✓	✓	✓	✓	-	-		✓	-	✓	✓	-	-	
10	14452	✓	-	-	✓	-			✓	✓	✓	✓	-	-		✓	-	✓	✓	-	-	
11	23258	✓	✓	-	✓	-			✓	✓	✓	-	-	-		✓	-	✓	✓	-	-	
12	12058	✓	-	-	✓	-			✓	-	✓	✓	-	-		✓	-	✓	✓	-	-	
13	6477	✓	✓	?	✓	-	kleinere Bande in P2, Dopple- bande P6		✓	✓	✓	✓	-	-		✓	-	✓	✓	-	-	
14	708	✓	-	✓	✓				✓	✓	✓	✓	-	-		✓	-	✓	✓	-	-	

**Fortsetzung Tabelle E1: Zusammenfassung der PCR-Amplifikationen zum molekularbiologischen Nachweis der Effektorsequenzen in den Pathotypen 1, 2, 6 und 18 von *S. endobioticum*.** ✓: Effektoramplifikation, -: keine Amplifikation, ?: unklare Amplifikation, Tk: 'Tomensa' Kontrolle cDNA, T DNA: 'Tomensa' gDNA.

		1. biol. Wiederholung						2. biol. Wiederholung						3. biol. Wiederholung								
15	18396	✓	✓	-	✓	-		✓	✓	-	✓	-		✓	-	✓	✓	-	-			
16	9511	✓	✓	✓	✓	-		✓	✓	✓	✓	-		✓	-	-	✓	-	-			
17	16558	✓	✓	✓	✓	-	Doppel- bande P1	✓	✓	✓	✓	-	Doppel- bande P18	✓	-	✓	✓	-	-			
18	9561	✓	✓	✓	✓	-		✓	✓	✓	✓	-		✓	-	✓	✓	-	-			
19	16314	-	✓	-	✓	-	Vortest P18 positiv	✓	✓	✓	✓	-		✓	-	✓	✓	-	-			
20	232	✓	✓	✓	✓	-	P6 Zusatz- bande	✓	✓	✓	✓	-	-	✓	-	✓	✓	-	-			
21	8695	✓	✓	-	✓	-		✓	✓	✓	✓	-	-	P18 Zusatz- banden	✓	-	✓	✓	-	-	P18 Zusatz- banden	
22	16505	✓	✓	✓	✓	-	-	✓	✓	✓	✓	-	-	✓	-	✓	✓	-	-			
23	8270	✓	✓	✓	✓	-	-	✓	✓	✓	✓	-	-	✓	-	✓	✓	-	-			
24	1644	✓	✓	✓	✓	-	-	✓	✓	✓	✓	-	-	✓	-	✓	-	-	-			
25	4592	✓	✓	✓	✓	-	-	Zusatz- bande P18	✓	✓	✓	✓	-	-	P18 Zusatzbande	✓	-	✓	✓	-	-	Zusatz- bande P18
26	59	✓	✓	✓	✓	-	-	✓	✓	✓	✓	-	-	✓	-	✓	✓	-	-			
27	17637	✓	✓	✓	✓	-	-	✓	✓	✓	✓	-	-	✓	-	✓	✓	-	-			
28	4632	✓	✓	✓	✓	-	-	✓	-	✓	✓	-	-	✓	-	✓	✓	-	-			
29	4838	✓	✓	✓	✓	-	-	✓	✓	✓	✓	-	-	✓	-	✓	✓	-	-			
30	820	✓	✓	✓	✓	-	-	✓	✓	✓	✓	-	-	P1 Zusatz- banden	✓	✓	✓	✓	✓	-		
31	21903	✓	✓	✓	✓	-	-	✓	✓	✓	✓	-	-	✓	-	✓	✓	-	-			
32	818	✓	✓	✓	✓	-	-	✓	✓	✓	✓	-	-	✓	-	✓	✓	-	-			
33	12020	✓	✓	✓	✓	-	-	✓	✓	✓	✓	-	-	✓	-	✓	✓	-	-			

## Fortsetzung Tabelle E1: Zusammenfassung der PCR-Amplifikationen zum molekularbiologischen Nachweis der Effektorsequenzen in den Pathotypen 1, 2, 6 und

18 von *S. endobioticum*. ✓: Effektoramplifikation, -: keine Amplifikation, ?: unklare Amplifikation, Tk: 'Tomensa' Kontrolle cDNA, T DNA: 'Tomensa' gDNA.

		1. biol. Wiederholung						2. biol. Wiederholung						3. biol. Wiederholung								
34	24410	✓	✓	✓	✓	-	-		✓	✓	✓	✓	-	-		✓	-	✓	-	-	-	
35	7924	✓	✓	✓	✓	-	-		✓	✓	✓	✓	-	-		✓	-	✓	✓	-	-	
36	7931	✓	✓	✓	✓	-	-	Zusatz- bande P18	✓	✓	✓	✓	-	-		✓	-	✓	✓	-	-	
37	21259	✓	✓	✓	✓	-	-		✓	✓	✓	✓	-	-		✓	-	✓	✓	-	-	
38	11138	✓	✓	✓	✓	-	-		✓	✓	✓	✓	✓	-		✓	-	✓	✓	-	-	
39	7174	✓	✓	✓	✓	-	-		✓	-	✓	✓	-	-		✓	-	✓	✓	-	-	
40	17205	✓	✓	✓	✓	-	-		✓	✓	✓	✓	-	-		✓	-	✓	✓	-	-	
41	20688	✓	✓	✓	✓	-	-		✓	✓	✓	✓	-	-		✓	-	✓	✓	-	-	
42	13822	✓	✓	✓	✓	-	-		✓	✓	✓	✓	-	-		✓	-	✓	✓	-	-	
43	8819	✓	✓	✓	✓	-	-		✓	✓	✓	✓	-	-		-	✓	✓	✓	-	-	
44	4522	✓	✓	✓	✓	-	-	P2, P6 größere Bande	✓	✓	✓	✓	-	-		✓	-	✓	✓	-	-	
45	9555	-	-	-	✓	-	-		✓	-	✓	✓	-	-		-	-	✓	✓	-	-	
46	6038	✓	✓	✓	✓	-	-		✓	✓	✓	✓	-	-		✓	-	✓	✓	-	-	
47	7431	-	-	-	-	-	-		✓	-	✓	✓	-	-		-	-	-	-	-	-	
48	20874	✓	✓	✓	✓	-	-		✓	✓	✓	✓	-	-		✓	-	✓	✓	-	-	
49	404	✓	✓	✓	✓	-	-		✓	✓	✓	✓	-	-		✓	-	✓	✓	-	-	
50	3147	✓	✓	✓	✓	-	-	keine klare Trennung zu Primern	✓	✓	✓	✓	-	-	keine klare Trennung zu Primern	✓	✓	✓	✓	-	-	keine klare Trennung zu Primern
51	4564	✓	✓	✓	✓	-	-	Zusatz- banden P18	✓	✓	✓	✓	-	-	Zusatz- banden P18	✓	-	✓	✓	-	-	Zusatz- banden P18

Fortsetzung Tabelle E1: Zusammenfassung der PCR-Amplifikationen zum molekularbiologischen Nachweis der Effektorsequenzen in den Pathotypen 1, 2, 6 und 18 von *S. endobioticum*. ✓: Effektoramplifikation, -: keine Amplifikation, ?: unklare Amplifikation, Tk: 'Tomensa' Kontrolle cDNA, T DNA: 'Tomensa' gDNA.

		1. biol. Wiederholung						2. biol. Wiederholung						3. biol. Wiederholung							
52	11376	✓	✓	✓	✓	-	-	Zusatz- bande P18, P6	✓	✓	✓	✓	-	-		✓	-	✓	✓	-	-
53	18768	✓	✓	✓	✓	-	-	Zusatz- bande P18, P6	✓	-	✓	✓	-	-		✓	-	✓	✓	-	-
54	7076	-	-	✓	-	-	-		✓	✓	✓	✓	-	-		✓	-	✓	✓	-	-
55	867	✓	-	-	-	-	-	P1, P6 größere Bande	✓	✓	✓	✓	-	-		✓	-	✓	✓	-	-
56	3052	-	✓	✓	-	-	-		✓	✓	✓	✓	-	-		✓	✓	✓	✓	-	-
57	17636	✓	-	-	-	-	-		✓	✓	✓	✓	-	-	P1 schwach	✓	-	✓	✓	-	-
58	15062	✓	✓	✓	✓	-	-	P2 schwach	✓	✓	✓	✓	-	-	P18, P1 schwach	✓	-	✓	✓	-	-
59	5644	✓	✓	✓	✓	-	-	P18 Zusatzbande	✓	✓	✓	✓	-	-		✓	-	✓	✓	-	-
60	1590	✓	-	-	✓	-	-	P18 Zusatzbande	✓	✓	✓	✓	-	-		✓	✓	✓	✓	-	-
61	13242	-	-	-	-	-	-		✓	✓	✓	✓	-	✓		✓	-	✓	✓	-	-
62	23059	✓	-	-	✓	-	-		✓	-	✓	✓	-	-		✓	-	✓	✓	-	-
63	14425	-	-	-	-	-	-		✓	✓	✓	✓	-	-		✓	-	✓	✓	-	-
64	7419	✓	✓	✓	✓	-	-		✓	✓	✓	✓	-	-		✓	-	✓	✓	-	-
65	10703	✓	✓	-	✓	-	-	Zusatz- banden P18	✓	✓	✓	✓	-	-	Zusatz-bande P18, P1	✓	-	✓	✓	-	-
66	2158	✓	✓	✓	✓	-	-		✓	✓	✓	✓	-	-		✓	-	✓	✓	-	-

## E 2. Statistische Auswertung des Einflusses der Effektorexpression auf die Expression und Verteilung von TRV

## E 2.1 Zusammenfassung der Ergebnisse der Auswertung im Generalisierten Linearen Modell

## Deviance Residuals:

Min	1Q	Median	3Q	Max
-4.2672	-0.5957	0.2315	0.9350	2.1197

## Coefficients:

	Estimate	Std. Error	t value	Pr(> t )		
(Intercept)	-1.475e+00	4.589e-01	-3.215	0.00245	(Intercept)	**
Wiederholung2	3.836e-01	2.235e-01	1.716	0.09314	Wiederholung2	.
Wiederholung3	1.525e+00	2.243e-01	6.801	2.24e-08	Wiederholung3	***
VarianteE10	9.981e-01	5.963e-01	1.674	0.10127	VarianteE10	
VarianteE11	3.301e-03	6.872e-01	0.005	0.99619	VarianteE11	
VarianteE12	-6.726e-01	6.641e-01	-1.013	0.31667	VarianteE12	
VarianteE13	-1.745e-01	6.254e-01	-0.279	0.78148	VarianteE13	
VarianteE14	-3.610e-01	6.376e-01	-0.566	0.57414	VarianteE14	
VarianteE18	1.159e-09	6.161e-01	0.000	1.00000	VarianteE18	
VarianteE2	4.783e-01	6.000e-01	0.797	0.42957	VarianteE2	
VarianteE22	-5.635e-01	6.539e-01	-0.862	0.39346	VarianteE22	
VarianteE8	2.241e+00	6.512e-01	3.441	0.00128	VarianteE8	**
VarianteE9	-2.661e-01	6.311e-01	-0.422	0.67537	VarianteE9	
VarianteKontrolle	1.656e-01	6.090e-01	0.272	0.78699	VarianteKontrolle	
Zeitpunkt9 dpi/ 6 dpi	1.146e+00	5.978e-01	1.917	0.06171	Zeitpunkt9 dpi/ 6 dpi	.
VarianteE10:Zeitpunkt9 dpi/ 6 dpi	-6.942e-01	8.345e-01	-0.832	0.40996	VarianteE10:Zeitpunkt9 dpi/ 6 dpi	
VarianteE11:Zeitpunkt9 dpi/ 6 dpi	1.494e-01	9.525e-01	0.157	0.87609	VarianteE11:Zeitpunkt9 dpi/ 6 dpi	
VarianteE12:Zeitpunkt9 dpi/ 6 dpi	8.991e-01	8.830e-01	1.018	0.31411	VarianteE12:Zeitpunkt9 dpi/ 6 dpi	
VarianteE13:Zeitpunkt9 dpi/ 6 dpi	2.642e-02	8.501e-01	0.031	0.97535	VarianteE13:Zeitpunkt9 dpi/ 6 dpi	
VarianteE14:Zeitpunkt9 dpi/ 6 dpi	5.112e-01	8.619e-01	0.593	0.55616	VarianteE14:Zeitpunkt9 dpi/ 6 dpi	
VarianteE18:Zeitpunkt9 dpi/ 6 dpi	-2.218e-01	8.432e-01	-0.263	0.79374	VarianteE18:Zeitpunkt9 dpi/ 6 dpi	
VarianteE2:Zeitpunkt9 dpi/ 6 dpi	-1.563e-02	8.412e-01	-0.019	0.98526	VarianteE2:Zeitpunkt9 dpi/ 6 dpi	
VarianteE22:Zeitpunkt9 dpi/ 6 dpi	-1.807e-01	8.753e-01	-0.206	0.83736	VarianteE22:Zeitpunkt9 dpi/ 6 dpi	
VarianteE8:Zeitpunkt9 dpi/ 6 dpi	-5.339e-01	9.604e-01	-0.556	0.58108	VarianteE8:Zeitpunkt9 dpi/ 6 dpi	
VarianteE9:Zeitpunkt9 dpi/ 6 dpi	3.408e-01	8.561e-01	0.398	0.69247	VarianteE9:Zeitpunkt9 dpi/ 6 dpi	
VarianteKontrolle:Zeitpunkt9 dpi/ 6 dpi	-1.538e-02	8.410e-01	-0.018	0.98549	VarianteKontrolle:Zeitpunkt9 dpi/ 6 dpi	

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

```

Deviance Residuals:
    Min       1Q   Median       3Q      Max
-1.60872  -0.84112  -0.01195   0.58974   1.71326

Coefficients:
                Estimate Std. Error t value Pr(>|t|)
(Intercept)      -3.0872    0.3752  -8.229 3.84e-07 ***
Wiederholung2     0.7135    0.2283   3.126 0.006519 **
Wiederholung3     1.3931    0.2577   5.407 5.82e-05 ***
Wiederholung4     1.3801    0.2857   4.830 0.000185 ***
VarianteoH_11569   2.6572    0.4170   6.372 9.25e-06 ***
VarianteP18_12020  1.9667    0.4196   4.687 0.000247 ***
VarianteP18_24410  2.1095    0.4201   5.022 0.000125 ***
Zeitpunkt9dpi/ 6dpi 1.6581    0.3936   4.213 0.000660 ***
VarianteoH_11569:Zeitpunkt9dpi/ 6dpi -0.8564    0.5365  -1.596 0.129983
VarianteP18_12020:Zeitpunkt9dpi/ 6dpi -0.6691    0.5277  -1.268 0.222917
VarianteP18_24410:Zeitpunkt9dpi/ 6dpi -0.5530    0.5245  -1.054 0.307430
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

```

## E.2.2 Ergebnis der Devianzanalyse

```

                Df Deviance Resid. Df Resid. Dev      F    Pr(>F)
NULL                    26    214.134
Wiederholung            3    33.269      23    180.865  9.1532 0.0009238 ***
Variante                 3   106.923      20    73.942 29.4173 9.549e-07 ***
Zeitpunkt                1    49.917      19    24.025 41.2001 8.495e-06 ***
Variante:Zeitpunkt      3     3.479      16    20.547  0.9571 0.4368175
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

```

```

                Df Deviance Resid. Df Resid. Dev      F    Pr(>F)
NULL                    69    426.31
Wiederholung            2   104.044      67    322.27 23.2501 1.287e-07 ***
Variante                11   100.703      56    221.57  4.0915 0.0003737 ***
Zeitpunkt               1    97.811      55    123.76 43.7146 4.249e-08 ***
Variante:Zeitpunkt     11    11.505      44    112.25  0.4675 0.9133228
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

```

## E.2.3 Paarweise Mittelwertvergleiche der Proportionen nach Rücktransformation der Daten

contrast	odds.ratio	SE	df	z.ratio	p.value
Kontrolle - oH_11569	0.1076347	0.03006044	NA	-7.981	<.0001
Kontrolle - P18_12020	0.1955081	0.05406964	NA	-5.902	<.0001
Kontrolle - P18_24410	0.1599271	0.04269966	NA	-6.865	<.0001
oH_11569 - P18_12020	1.8164036	0.48822414	NA	2.221	0.1176
oH_11569 - P18_24410	1.4858319	0.38510544	NA	1.528	0.4208
P18_12020 - P18_24410	0.8180075	0.20152412	NA	-0.815	0.8472

contrast	odds.ratio	SE	df	z.ratio	p.value
E1 - E10	0.52153984	0.21771861	NA	-1.559	0.9235
E1 - E11	0.92497032	0.44476026	NA	-0.162	1.0000
E1 - E12	1.24990146	0.55171752	NA	0.505	1.0000
E1 - E13	1.17506769	0.49949743	NA	0.380	1.0000
E1 - E14	1.11115828	0.47883361	NA	0.245	1.0000
E1 - E18	1.11727720	0.47102226	NA	0.263	1.0000
E1 - E2	0.62468198	0.26284696	NA	-1.118	0.9940
E1 - E22	1.92304309	0.84224348	NA	1.493	0.9429
E1 - E8	0.13894456	0.06691469	NA	-4.098	0.0024
E1 - E9	1.10037347	0.47098202	NA	0.223	1.0000
E1 - Kontrolle	0.85394807	0.35908091	NA	-0.375	1.0000
E10 - E11	1.77353722	0.84677550	NA	1.200	0.9891
E10 - E12	2.39655989	1.04768456	NA	1.999	0.6941
E10 - E13	2.25307368	0.94765267	NA	1.931	0.7396
E10 - E14	2.13053384	0.90860822	NA	1.774	0.8326
E10 - E18	2.14226625	0.89334508	NA	1.827	0.8034
E10 - E2	1.19776464	0.49777443	NA	0.434	1.0000
E10 - E22	3.68724102	1.60080788	NA	3.006	0.1068
E10 - E8	0.26641217	0.12684311	NA	-2.778	0.1892
E10 - E9	2.10985505	0.89355252	NA	1.763	0.8382
E10 - Kontrolle	1.63735923	0.68053209	NA	1.186	0.9901
E11 - E12	1.35128819	0.67212869	NA	0.605	1.0000
E11 - E13	1.27038421	0.61389387	NA	0.495	1.0000
E11 - E14	1.20129074	0.58663576	NA	0.376	1.0000
E11 - E18	1.20790600	0.58011847	NA	0.393	1.0000
E11 - E2	0.67535354	0.32422775	NA	-0.818	0.9997
E11 - E22	2.07903222	1.02703449	NA	1.482	0.9458
E11 - E8	0.15021516	0.08028650	NA	-3.547	0.0201
E11 - E9	1.18963111	0.57795296	NA	0.357	1.0000
E11 - Kontrolle	0.92321673	0.44274757	NA	-0.167	1.0000
E12 - E13	0.94012826	0.41757915	NA	-0.139	1.0000
E12 - E14	0.88899670	0.39986071	NA	-0.262	1.0000
E12 - E18	0.89389222	0.39406758	NA	-0.254	1.0000
E12 - E2	0.49978498	0.22003336	NA	-1.575	0.9182
E12 - E22	1.53855576	0.70213928	NA	0.944	0.9987
E12 - E8	0.11116441	0.05547012	NA	-4.402	0.0007
E12 - E9	0.88036817	0.39352919	NA	-0.285	1.0000
E12 - Kontrolle	0.68321231	0.30054173	NA	-0.866	0.9994
E13 - E14	0.94561215	0.41019627	NA	-0.129	1.0000
E13 - E18	0.95081944	0.40362582	NA	-0.119	1.0000
E13 - E2	0.53161361	0.22531950	NA	-1.491	0.9435
E13 - E22	1.63653814	0.72114291	NA	1.118	0.9940
E13 - E8	0.11824388	0.05728969	NA	-4.407	0.0006
E13 - E9	0.93643411	0.40350944	NA	-0.152	1.0000
E13 - Kontrolle	0.72672245	0.30776164	NA	-0.754	0.9998
E14 - E18	1.00550679	0.43274129	NA	0.013	1.0000
E14 - E2	0.56218992	0.24155995	NA	-1.340	0.9739
E14 - E22	1.73066531	0.77247168	NA	1.229	0.9868
E14 - E8	0.12504480	0.06121502	NA	-4.247	0.0013
E14 - E9	0.99029408	0.43244206	NA	-0.022	1.0000
E14 - Kontrolle	0.76852064	0.32996844	NA	-0.613	1.0000
E18 - E2	0.55911101	0.23498998	NA	-1.383	0.9669
E18 - E22	1.72118709	0.75273154	NA	1.242	0.9856
E18 - E8	0.12435997	0.05985829	NA	-4.331	0.0009
E18 - E9	0.98487060	0.42099052	NA	-0.036	1.0000
E18 - Kontrolle	0.76431173	0.32098542	NA	-0.640	1.0000
E2 - E22	3.07843535	1.34564383	NA	2.572	0.2954
E2 - E8	0.22242448	0.10664417	NA	-3.135	0.0744
E2 - E9	1.76149385	0.75171303	NA	1.327	0.9758
E2 - Kontrolle	1.36701249	0.57279427	NA	0.746	0.9999
E22 - E8	0.07225244	0.03589795	NA	-5.289	<.0001
E22 - E9	0.57220427	0.25379929	NA	-1.259	0.9840
E22 - Kontrolle	0.44406081	0.19385682	NA	-1.860	0.7844
E8 - E9	7.91951442	3.85649816	NA	4.249	0.0013
E8 - Kontrolle	6.14596249	2.94905119	NA	3.784	0.0085
E9 - Kontrolle	0.77605295	0.33093194	NA	-0.595	1.0000

## E 3. Signifikant verschieden Abundante Proteine der paarweisen Vergleiche

## E 3.1 Zusammenfassung der signifikant verschieden abundanten Proteine des Vergleichs KK gegen TK

**Tabelle E2: Auflistung der signifikant verschiedenen Proteine des Vergleichs KK gegen TK.** Signifikanzniveau des Student's T-test  $-\log > 2$ , KK: 'Karolin' Kontrolle, TK 'Tomensa' Kontrolle.

KK_12	KK_16	KK_20	KK_24	KK_A3	TK_10	TK_14	TK_18	TK_22	TK_A1	-Log Student's T-test p-value KK_TK	Student's T-test Difference KK_TK	Fasta headers
25,66	25,7738	24,9936	25,3808	25,34669	28,853	28,384	29,409	29,5829	29,12	6,2881	-3,63891	ref   XP_015159415.1   PREDICTED: probable (S)-N-methylcoclaurine 3-hydroxylase isozyme 2 [Solanum tuberosum]
28,58	28,3107	28,5212	28,7388	28,66807	31,0066	29,57	31,088	30,7074	30,652	4,0537	-2,04009	ref   XP_006349906.2   PREDICTED: apyrase-like [Solanum tuberosum];ref   XP_006349910.1   PREDICTED: apyrase-like isoform X2 [Solanum tuberosum]
24,76	25,3335	25,1386	24,8392	26,54988	27,3432	27,39	26,405	26,3547	27,725	2,4191	-1,71975	ref   XP_006349368.1   PREDICTED: uncharacterized protein LOC102604409 [Solanum tuberosum]
NaN	23,5638	23,9659	24,2323	NaN	24,8378	24,785	26,241	25,6222	25,978	2,0257	-1,57214	ref   XP_006366967.1   PREDICTED: salutaridinol 7-O-acetyltransferase-like [Solanum tuberosum]
25,56	NaN	25,1357	25,3837	25,08091	26,7604	NaN	NaN	26,8278	NaN	3,0525	-1,5035	ref   XP_006341171.1   PREDICTED: histone deacetylase HDT1 [Solanum tuberosum];gb   ABB55369.1   histone deacetylase 2a-like [Solanum tuberosum]
25,56	NaN	NaN	26,273	NaN	26,9406	27,647	27,769	27,5064	27,209	2,2923	-1,49906	ref   XP_015164735.1   PREDICTED: glutamate--glyoxylate aminotransferase 2-like [Solanum tuberosum]

## Fortsetzung Tabelle E2: Auflistung der signifikant verschiedenen Proteine des Vergleichs KK gegen TK.

KK_12	KK_16	KK_20	KK_24	KK_A3	TK_10	TK_14	TK_18	TK_22	TK_A1	-Log Student's T-test p-value KK_TK	Student's T-test Difference KK_TK	Fasta headers
24,44	24,5404	24,0712	24,6424	24,64977	26,3146	26,261	25,797	26,0953	25,296	3,899	-1,48394	ref   XP_006359801.1   PREDICTED: polyneuridine-aldehyde esterase-like [Solanum tuberosum]
26,15	25,5789	25,7606	25,3598	25,71022	27,0856	26,49	27,434	27,1924	27,308	3,7978	-1,39015	ref   XP_015167987.1   PREDICTED: zeatin O-xylosyltransferase-like [Solanum tuberosum]
27,68	27,1287	27,9288	27,7512	28,51694	29,4303	28,527	28,806	28,8759	29,826	2,3944	-1,29095	ref   XP_006341987.1   PREDICTED: thioredoxin H-type 1 [Solanum tuberosum]
23,2	23,4344	23,469	23,5031	23,43466	25,0208	25,072	NaN	23,847	NaN	2,2053	-1,23781	ref   XP_006351762.1   PREDICTED: phospho-2-dehydro-3-deoxyheptonate aldolase 2, chloroplastic-like [Solanum tuberosum]
28,34	27,4818	27,8646	27,8857	28,72871	29,6801	28,848	29,324	28,8304	29,452	2,5648	-1,16719	ref   XP_006349009.1   PREDICTED: osmotin-like protein [Solanum tuberosum]
25,22	25,2646	25,2905	25,2357	25,34777	26,5037	26,758	NaN	26,2324	26,226	4,7057	-1,15784	gb   AAM22685.1   AF500588_1 heat shock protein 80, partial [Solanum tuberosum]
26,96	26,4739	26,9023	27,4607	27,00678	28,3173	28,302	27,7	28,2204	28,025	3,4465	-1,15204	ref   XP_006367888.1   PREDICTED: primary amine oxidase-like [Solanum tuberosum];ref   XP_015159060.1   PREDICTED: LOW QUALITY PROTEIN: primary amine oxidase-like [Solanum tuberosum]
26,48	26,6084	26,2281	26,2249	25,86311	27,2543	27,631	27,539	27,304	27,306	4,2064	-1,1267	ref   XP_006362730.1   PREDICTED: molybdopterin biosynthesis protein CNX1 [Solanum tuberosum]

## Fortsetzung Tabelle E2: Auflistung der signifikant verschiedenen Proteine des Vergleichs KK gegen TK.

KK_12	KK_16	KK_20	KK_24	KK_A3	TK_10	TK_14	TK_18	TK_22	TK_A1	-Log Student's T-test p-value KK_TK	Student's T-test Difference KK_TK	Fasta headers
26,67	26,6449	26,6603	26,9719	27,11991	28,4281	27,455	NaN	27,9739	27,768	2,8954	-1,09307	ref   XP_006365623.1   PREDICTED: cinnamoyl-CoA reductase 1-like isoform X1 [Solanum tuberosum];ref   XP_015160004.1   PREDICTED: cinnamoyl-CoA reductase 1-like isoform X2 [Solanum tuberosum]
25,72	25,6459	25,5606	25,6513	25,53985	26,9655	26,529	26,929	26,2635	26,829	4,2884	-1,07957	ref   XP_006348416.1   PREDICTED: uncharacterized protein LOC102589993 [Solanum tuberosum]
27,61	26,8353	26,9957	27,0688	27,47011	28,1716	28,121	28,32	28,2725	28,452	3,8535	-1,07175	ref   XP_015166519.1   PREDICTED: tropinone reductase homolog At5g06060-like isoform X2 [Solanum tuberosum];ref   XP_006352697.1   PREDICTED: tropinone reductase homolog At5g06060-like isoform X1 [Solanum tuberosum]
27,09	26,6783	27,13	27,2489	26,58706	28,0852	28,015	27,676	28,0134	28,151	3,8229	-1,04144	ref   XP_006349432.1   PREDICTED: cruciferin PGCRURSE5-like isoform X1 [Solanum tuberosum];ref   XP_015165044.1   PREDICTED: 12S seed storage protein CRD-like isoform X2 [Solanum tuberosum];ref   XP_015165043.1   PREDICTED: 12S seed storage protein CRD-
NaN	NaN	23,8917	24,6239	23,96543	25,4041	25,126	NaN	25,0567	25,075	2,2465	-1,00523	ref   XP_006344039.1   PREDICTED: beta-glucosidase BoGH3B-like [Solanum tuberosum]
24,93	25,2679	25,0979	24,73	25,22225	25,7631	25,965	26,871	26,0587	25,583	2,4732	-0,99906	ref   XP_006348649.1   PREDICTED: cytosolic sulfotransferase 12-like [Solanum tuberosum]

## Fortsetzung Tabelle E2: Auflistung der signifikant verschiedenen Proteine des Vergleichs KK gegen TK.

KK_12	KK_16	KK_20	KK_24	KK_A3	TK_10	TK_14	TK_18	TK_22	TK_A1	-Log Student's T-test p-value KK_TK	Student's T-test Difference KK_TK	Fasta headers
25,52	26,4563	26,4944	26,0592	26,17286	26,9156	27,206	27,277	26,8787	27,037	2,8669	-0,92185	ref   XP_006343054.1   PREDICTED: ruBisCO large subunit-binding protein subunit beta, chloroplastic [Solanum tuberosum]
24,43	25,2664	25,3989	24,8639	24,80897	25,5689	25,76	26,058	25,6031	26,325	2,4261	-0,90889	ref   NP_001275094.1   single-stranded DNA binding protein precursor [Solanum tuberosum];emb   CAD86490.1   unnamed protein product [Solanum tuberosum];emb   CBD02086.1   unnamed protein product [Solanum tuberosum];emb   CAW98670.1   unnamed protein pr
26,07	25,8408	25,1846	25,2417	25,71463	26,459	25,92	26,395	26,4792	26,87	2,1223	-0,81369	ref   XP_006356896.1   PREDICTED: probable cinnamyl alcohol dehydrogenase 6 [Solanum tuberosum]
24,5	NaN	24,8263	24,4225	24,66687	25,1309	NaN	25,523	25,0359	25,559	2,3378	-0,70696	ref   XP_006358729.1   PREDICTED: uncharacterized protein LOC102600527 [Solanum tuberosum]
29,28	28,7666	28,805	28,8656	29,08692	29,6291	29,017	29,983	29,7263	29,759	2,0929	-0,66197	ref   XP_015164762.1   PREDICTED: zeatin O-glucosyltransferase-like [Solanum tuberosum]
28,77	28,6103	29,1195	28,8885	28,95651	29,6324	29,092	29,577	29,2754	29,814	2,3499	-0,60834	gb   ABB16984.1   thaliana 60S ribosomal protein L7 (At2g44120) [Solanum tuberosum];ref   XP_006366954.1   PREDICTED: 60S ribosomal protein L7-3 [Solanum tuberosum];prf     1909359B ribosomal protein L7
26,52	26,524	26,9964	27,0041	26,83605	27,7277	27,064	27,492	27,1145	27,404	2,1363	-0,58462	ref   XP_006341518.1   PREDICTED: aldose 1-epimerase [Solanum tuberosum]

## Fortsetzung Tabelle E2: Auflistung der signifikant verschiedenen Proteine des Vergleichs KK gegen TK.

KK_12	KK_16	KK_20	KK_24	KK_A3	TK_10	TK_14	TK_18	TK_22	TK_A1	-Log Student's T-test p-value KK_TK	Student's T-test Difference KK_TK	Fasta headers
28,65	28,3053	28,6056	28,5195	28,52092	29,4313	28,765	29,353	29,036	28,924	2,4964	-0,58136	ref   XP_006363460.1   PREDICTED: stem-specific protein TSJT1 [Solanum tuberosum]
25,46	25,4667	25,3425	25,2663	25,3532	25,7993	25,71	26,304	25,6945	26,257	2,4679	-0,57624	ref   XP_006356452.1   PREDICTED: zinc finger CCCH domain-containing protein 14-like [Solanum tuberosum]
26,75	26,8727	27,2306	27,2634	26,89701	27,4402	27,556	27,849	27,4928	27,519	2,7114	-0,5692	ref   XP_006349514.1   PREDICTED: heat shock cognate 70 kDa protein 2 [Solanum tuberosum]
27,04	27,4182	26,6358	26,8707	26,92807	27,4598	27,799	27,437	27,522	27,504	2,3609	-0,56591	ref   XP_006338643.1   PREDICTED: very-long-chain 3-oxoacyl-CoA reductase 1 [Solanum tuberosum]
24,59	24,6981	24,7685	24,7102	25,01048	25,3857	25,168	NaN	NaN	25,397	2,6976	-0,56133	ref   XP_006358652.1   PREDICTED: reticulon-like protein B6 [Solanum tuberosum]
27,87	28,0548	27,8882	27,9713	28,09698	28,5251	28,559	28,82	28,3582	28,394	3,4732	-0,55554	ref   XP_006348688.1   PREDICTED: argininosuccinate synthase, chloroplastic [Solanum tuberosum]
26,51	26,6241	26,2989	26,6418	26,5862	27,2516	26,967	NaN	27,1248	26,972	3,2176	-0,5473	ref   XP_006364950.1   PREDICTED: eukaryotic translation initiation factor 3 subunit F-like [Solanum tuberosum]
24,69	24,5781	24,669	24,3512	24,60269	25,1604	25,182	NaN	24,712	25,405	2,1263	-0,53734	ref   XP_006364157.1   PREDICTED: serine/threonine-protein phosphatase PP2A catalytic subunit [Solanum tuberosum]

Fortsetzung Tabelle E2: Auflistung der signifikant verschiedenen Proteine des Vergleichs KK gegen TK.

KK_12	KK_16	KK_20	KK_24	KK_A3	TK_10	TK_14	TK_18	TK_22	TK_A1	-Log Student's T-test p-value KK_TK	Student's T-test Difference KK_TK	Fasta headers
25,14	25,4666	25,1507	25,1607	25,16331	25,8234	25,471	NaN	25,6796	25,832	2,6665	-0,4854	ref   XP_006340240.1   PREDICTED: uncharacterized protein LOC102578824 [Solanum tuberosum];gb   AIU49532.1   AT5G11810-like protein, partial [Solanum tuberosum]
26,6	26,4725	26,3244	26,491	26,72741	26,8557	27,084	27,314	26,6546	27,132	2,1868	-0,48522	ref   XP_006342986.1   PREDICTED: WD-40 repeat-containing protein MSI4-like [Solanum tuberosum]
28,54	28,7552	28,9506	28,7358	28,34393	29,0751	29,019	29,452	29,049	29,156	2,2395	-0,48516	ref   XP_006351680.1   PREDICTED: sulfite reductase 1 [ferredoxin], chloroplastic [Solanum tuberosum]
26,66	27,0866	27,0978	27,0895	26,85674	27,404	27,451	27,608	27,4593	27,294	2,8782	-0,48475	ref   XP_006364490.2   PREDICTED: 5-methyltetrahydropteroyltriglutamate--homocysteine methyltransferase-like [Solanum tuberosum]
26,13	26,3638	25,9544	26,0118	25,98098	26,668	26,55	26,426	26,4666	26,681	3,0677	-0,4706	ref   XP_006341452.1   PREDICTED: staphylococcal nuclease domain-containing protein 1-like [Solanum tuberosum];ref   XP_006341451.1   PREDICTED: staphylococcal nuclease domain-containing protein 1-like [Solanum tuberosum]
28,15	28,2027	28,0163	28,0432	28,05315	28,7201	28,405	28,598	28,2807	28,801	2,7173	-0,46722	ref   XP_006359680.1   PREDICTED: subtilisin-like protease SBT1.6 [Solanum tuberosum]
28,33	28,675	28,3662	28,166	27,95555	28,6267	28,914	28,864	28,7459	28,664	2,1232	-0,46531	ref   XP_006348634.1   PREDICTED: heat shock protein 90-5, chloroplastic [Solanum tuberosum]

## Fortsetzung Tabelle E2: Auflistung der signifikant verschiedenen Proteine des Vergleichs KK gegen TK.

KK_12	KK_16	KK_20	KK_24	KK_A3	TK_10	TK_14	TK_18	TK_22	TK_A1	-Log Student's T-test p-value KK_TK	Student's T-test Difference KK_TK	Fasta headers
27,91	27,9827	28,0025	27,8828	27,67405	28,5727	28,059	28,581	28,2533	28,3	2,4055	-0,46312	ref   XP_006365388.1   PREDICTED: eukaryotic translation initiation factor 3 subunit G-like [Solanum tuberosum]
28,35	28,2335	28,4778	28,1437	28,07577	28,7664	28,671	NaN	28,9279	28,476	2,2323	-0,45428	gb   ABB72808.1   cyc07-like protein [Solanum tuberosum];gb   ABB87133.1   40S ribosomal protein S3a-like [Solanum tuberosum];gb   ABB72815.1   cyc07-like protein [Solanum tuberosum];gb   ABB55362.1   cyc07-like [Solanum tuberosum]
28,27	28,1053	28,2388	28,1502	27,85899	28,416	28,416	28,495	28,9194	28,533	2,1774	-0,43108	ref   XP_006347401.1   PREDICTED: glyceraldehyde-3-phosphate dehydrogenase, cytosolic [Solanum tuberosum]
28,12	27,9251	27,7971	27,8265	27,95144	28,5216	28,543	28,067	28,2246	28,353	2,3643	-0,41823	ref   XP_006360493.1   PREDICTED: pyruvate kinase 1, cytosolic-like [Solanum tuberosum]
27,09	27,069	26,7604	27,0279	27,16212	27,3126	27,537	27,508	27,2371	27,544	2,5966	-0,40622	ref   XP_015168140.1   PREDICTED: acylamino-acid-releasing enzyme isoform X3 [Solanum tuberosum];ref   XP_015168139.1   PREDICTED: acylamino-acid-releasing enzyme isoform X2 [Solanum tuberosum];ref   XP_006356048.1   PREDICTED: acylamino-acid-releasing
24,61	24,8358	24,6414	24,4538	24,5566	24,9584	25,077	25,354	24,754	24,975	2,0782	-0,40429	ref   XP_006350543.2   PREDICTED: pentatricopeptide repeat-containing protein At3g49240 [Solanum tuberosum]

## Fortsetzung Tabelle E2: Auflistung der signifikant verschiedenen Proteine des Vergleichs KK gegen TK.

KK_12	KK_16	KK_20	KK_24	KK_A3	TK_10	TK_14	TK_18	TK_22	TK_A1	-Log Student's T-test p-value KK_TK	Student's T-test Difference KK_TK	Fasta headers
27,02	26,5924	26,9399	26,8472	27,13212	27,2211	27,092	27,324	27,4963	27,412	2,0891	-0,40358	ref   XP_015158396.1   PREDICTED: ubiquitin carboxyl-terminal hydrolase 13-like isoform X5 [Solanum tuberosum];ref   XP_015158395.1   PREDICTED: ubiquitin carboxyl-terminal hydrolase 13-like isoform X4 [Solanum tuberosum]
28,95	28,8758	28,9703	29,0397	28,7024	29,37	29,102	29,687	29,1558	29,24	2,0167	-0,40287	ref   XP_006351268.1   PREDICTED: inosine-5-monophosphate dehydrogenase 2-like [Solanum tuberosum]
26,02	25,844	26,0183	26,0696	26,2377	26,5201	26,131	26,484	26,3657	26,629	2,204	-0,38844	ref   XP_006347385.1   PREDICTED: phytochrome-associated serine/threonine-protein phosphatase 3 [Solanum tuberosum]
28,85	28,9295	28,5359	28,6773	28,80597	29,2304	29,092	29,221	29,2479	28,92	2,4568	-0,38146	ref   XP_006365126.1   PREDICTED: diaminopimelate decarboxylase 1, chloroplastic-like [Solanum tuberosum]
28,76	28,7689	28,6869	28,6318	28,6421	28,9872	28,975	29,302	28,9921	29,023	3,1108	-0,35816	ref   XP_006338351.1   PREDICTED: eukaryotic translation initiation factor 3 subunit M-like isoform X1 [Solanum tuberosum];gb   ABA81881.1   unknown [Solanum tuberosum]
25,42	25,3025	25,3587	25,4365	25,34797	25,8729	25,395	25,7	25,7072	25,957	2,1316	-0,35377	ref   XP_006346461.1   PREDICTED: 2-hydroxyisoflavanone dehydratase-like [Solanum tuberosum]
28,5	28,2556	28,3715	28,3179	28,28617	28,5297	28,634	28,817	28,8687	28,609	2,6478	-0,3446	ref   XP_006358509.1   PREDICTED: glutamate--tRNA ligase, cytoplasmic [Solanum tuberosum]

Fortsetzung Tabelle E2: Auflistung der signifikant verschiedenen Proteine des Vergleichs KK gegen TK.

KK_12	KK_16	KK_20	KK_24	KK_A3	TK_10	TK_14	TK_18	TK_22	TK_A1	-Log Student's T-test p-value KK_TK	Student's T-test Difference KK_TK	Fasta headers
28,73	28,5939	28,7914	28,5926	28,5151	29,0713	28,849	29,22	28,8851	28,887	2,3391	-0,3385	ref   XP_006351291.1   PREDICTED: eukaryotic translation initiation factor 3 subunit E [Solanum tuberosum]
26,63	26,6652	26,3982	26,6787	26,67398	26,9617	26,922	26,792	27,1057	26,941	2,7443	-0,33522	ref   XP_006353646.1   PREDICTED: uridine kinase-like protein 1, chloroplastic [Solanum tuberosum]
24,49	24,4797	24,5068	24,4764	24,24525	24,7795	24,818	24,886	24,6162	24,769	3,0051	-0,33395	ref   XP_015160021.1   PREDICTED: ras GTPase-activating protein-binding protein 2-like [Solanum tuberosum];ref   XP_006365663.1   PREDICTED: ras GTPase-activating protein-binding protein 2-like [Solanum tuberosum]
28,68	28,5818	28,9467	28,7329	28,68418	29,1716	28,933	29,147	28,9862	29,037	2,603	-0,32896	ref   XP_006359603.1   PREDICTED: NADP-dependent D-sorbitol-6-phosphate dehydrogenase-like [Solanum tuberosum]
23,91	24,0205	23,7106	23,9952	24,07284	24,1185	24,236	NaN	24,3444	24,343	2,1191	-0,31915	ref   XP_006355393.1   PREDICTED: acetate/butyrate--CoA ligase AAE7, peroxisomal-like [Solanum tuberosum]
27,77	27,8959	27,9191	27,6892	27,73879	28,0552	28,112	28,269	27,9394	28,034	2,3753	-0,27835	ref   XP_006359299.1   PREDICTED: glutamate-1-semialdehyde 2,1-aminomutase, chloroplastic [Solanum tuberosum]
29,56	29,4768	29,3929	29,366	29,48924	29,7815	29,594	29,813	29,5712	29,645	2,2166	-0,2237	ref   XP_006347288.1   PREDICTED: lysine--tRNA ligase, cytoplasmic isoform X1 [Solanum tuberosum];ref   XP_015164247.1   PREDICTED: lysine--tRNA ligase isoform X2 [Solanum tuberosum]

Fortsetzung Tabelle E2: Auflistung der signifikant verschiedenen Proteine des Vergleichs KK gegen TK.

KK_12	KK_16	KK_20	KK_24	KK_A3	TK_10	TK_14	TK_18	TK_22	TK_A1	-Log Student's T-test p-value KK_TK	Student's T-test Difference KK_TK	Fasta headers
26,72	26,895	26,7786	26,9745	26,73117	26,5785	26,678	26,479	26,3927	26,598	2,3422	0,27415	ref   XP_006353246.1   PREDICTED: LETM1 and EF-hand domain-containing protein 1, mitochondrial [Solanum tuberosum]
31,17	31,1463	31,1038	31,1618	31,04564	30,6505	30,979	30,96	30,7158	30,931	2,3231	0,27908	ref   XP_006344664.1   PREDICTED: probable xyloglucan endotransglucosylase/hydrolase 1 [Solanum tuberosum]
31,14	31,4353	31,5015	31,4086	31,21645	31,1705	31,09	31,059	31,0164	30,96	2,1796	0,28144	ref   XP_006364500.1   PREDICTED: V-type proton ATPase subunit B2 [Solanum tuberosum];ref   XP_006364499.1   PREDICTED: V-type proton ATPase subunit B2 [Solanum tuberosum]
29,43	29,5911	29,6609	29,687	29,445	29,0845	29,235	29,418	29,3501	29,269	2,2552	0,29184	ref   NP_001275026.1   alpha-1,4-glucan-protein synthase [UDP-forming] 1 [Solanum tuberosum];gb   AFX67042.1   alpha-1,4-glucan-protein synthase [Solanum tuberosum]
25,9	25,8289	26,0295	25,9574	26,00097	25,7229	25,521	NaN	25,5634	25,642	3,187	0,33038	ref   XP_006342507.1   PREDICTED: serine hydroxymethyltransferase 3, chloroplastic-like [Solanum tuberosum]
27,17	27,1436	27,2121	27,3286	27,21085	26,7116	26,756	26,945	26,8699	27,043	3,029	0,34843	ref   XP_006350070.1   PREDICTED: transmembrane 9 superfamily member 11-like [Solanum tuberosum]
26,61	26,4701	26,6065	26,4239	26,48427	26,3865	26,043	26,231	25,8812	26,28	2,1776	0,35534	ref   XP_006344641.1   PREDICTED: acyl-CoA-binding domain-containing protein 4 [Solanum tuberosum]

## Fortsetzung Tabelle E2: Auflistung der signifikant verschiedenen Proteine des Vergleichs KK gegen TK.

KK_12	KK_16	KK_20	KK_24	KK_A3	TK_10	TK_14	TK_18	TK_22	TK_A1	-Log Student's T-test p-value KK_TK	Student's T-test Difference KK_TK	Fasta headers
31,09	31,2215	31,1627	31,119	30,98053	30,5599	30,695	31,032	30,6356	30,733	2,5518	0,38338	gb   ABB72823.1   adenosine kinase isoform 1T-like protein [Solanum tuberosum];ref   NP_001274824.1   adenosine kinase isoform 1T-like protein [Solanum tuberosum]
32,3	32,4745	32,6861	32,612	32,45334	32,1253	32,228	32,281	32,0827	31,867	2,3619	0,3878	ref   XP_006345515.1   PREDICTED: transketolase, chloroplastic-like [Solanum tuberosum]
28,63	29,1904	28,6444	28,8957	28,65976	28,2797	28,413	28,515	28,4461	28,364	2,0718	0,40008	ref   XP_006354379.1   PREDICTED: probable xyloglucan endotransglucosylase/hydrolase protein 32 [Solanum tuberosum]
32	31,9995	32,2839	32,2073	31,99934	31,785	31,751	31,728	31,7359	31,466	2,8671	0,40454	gb   AAL99198.1   UTP:alpha-D-glucose-1-phosphate uridylyltransferase [Solanum tuberosum];gb   AAL99196.1   UTP:alpha-D-glucose-1-phosphate uridylyltransferase [Solanum tuberosum]
27,79	28,0221	27,9953	27,9916	28,01723	27,7589	27,495	27,381	27,5144	27,58	3,2578	0,41821	ref   XP_006344058.1   PREDICTED: ERBB-3 BINDING PROTEIN 1-like isoform X2 [Solanum tuberosum];ref   XP_006344057.1   PREDICTED: ERBB-3 BINDING PROTEIN 1-like isoform X1 [Solanum tuberosum]
29,12	29,3785	28,9973	29,3538	29,29332	28,8339	28,836	NaN	NaN	28,712	2,2699	0,43469	gb   AAB23705.1   cyclic nucleotide binding phosphatase [Solanum tuberosum=potatoes, tubers, Peptide Partial, 27 aa]

Fortsetzung Tabelle E2: Auflistung der signifikant verschiedenen Proteine des Vergleichs KK gegen TK.

KK_12	KK_16	KK_20	KK_24	KK_A3	TK_10	TK_14	TK_18	TK_22	TK_A1	-Log Student's T-test p-value KK_TK	Student's T-test Difference KK_TK	Fasta headers
30,87	30,8807	30,6895	30,8855	31,00477	30,2807	30,582	30,484	30,3103	30,384	3,5234	0,45717	ref   XP_006356209.1   PREDICTED: phospholipase D alpha 1 [Solanum tuberosum];ref   XP_006356208.1   PREDICTED: phospholipase D alpha 1 [Solanum tuberosum];ref   XP_006356207.1   PREDICTED: phospholipase D alpha 1 [Solanum tuberosum]
32,8	32,6786	33,0147	32,8155	32,8708	32,665	32,347	32,073	32,3451	32,394	2,6066	0,47184	emb   CAB92956.1   annexin p34 [Solanum tuberosum];gb   ABB02651.1   annexin p34-like [Solanum tuberosum];gb   ABA40432.1   annexin p34-like protein [Solanum tuberosum]
28,1	28,3096	28,4755	28,2582	27,85715	27,9205	27,561	27,85	27,6191	27,67	2,2807	0,47593	ref   XP_006364639.1   PREDICTED: uncharacterized protein LOC102586576 [Solanum tuberosum]
31,97	31,847	32,1406	32,0397	31,91421	31,4689	31,587	31,692	31,4569	31,241	3,2026	0,49285	gb   ABA81861.1   UDP-glucose:protein transglucosylase-like [Solanum tuberosum];ref   NP_001275274.1   alpha-1,4-glucan-protein synthase [UDP-forming] 2 [Solanum tuberosum]
25,57	25,4198	25,4651	25,3588	25,34878	24,7371	25,006	25,33	24,9173	24,402	2,0914	0,55496	ref   XP_006367366.1   PREDICTED: transmembrane 9 superfamily member 1-like [Solanum tuberosum]
29,69	29,6628	30,1483	30,1084	29,72314	29,5617	29,53	29,335	29,0748	29,03	2,1772	0,56086	ref   XP_006354791.1   PREDICTED: probable aldehyde dehydrogenase [Solanum tuberosum]

## Fortsetzung Tabelle E2: Auflistung der signifikant verschiedenen Proteine des Vergleichs KK gegen TK.

KK_12	KK_16	KK_20	KK_24	KK_A3	TK_10	TK_14	TK_18	TK_22	TK_A1	-Log Student's T-test p-value KK_TK	Student's T-test Difference KK_TK	Fasta headers
25,32	25,4944	25,6298	25,6055	25,79159	25,0935	25,133	NaN	24,6213	NaN	2,087	0,61829	ref   XP_006357757.1   PREDICTED: probable beta-D-xylosidase 6 [Solanum tuberosum]
32,6	32,6589	32,2514	32,4274	32,54832	31,9852	32,033	31,728	31,9262	31,503	3,21	0,6627	dbj   BAA00407.1   alpha-glucan phosphorylase precursor [Solanum tuberosum];sp   P04045.2
26,35	26,6584	26,7594	26,6494	26,54637	25,9652	26,356	26,036	25,3457	25,927	2,2441	0,66583	ref   XP_006345530.1   PREDICTED: uncharacterized protein LOC102593878 [Solanum tuberosum]
24,77	25,1919	25,37	25,2051	24,54392	24,4131	24,278	24,75	24,2283	24,068	2,0832	0,66912	ref   XP_006346856.1   PREDICTED: transmembrane protein 33 homolog [Solanum tuberosum]
25,47	25,5378	25,4569	25,2418	25,76742	24,6467	24,851	25,239	24,701	24,591	2,8628	0,68929	ref   NP_001305472.1   phosphoglycerate kinase, chloroplastic [Solanum tuberosum];gb   AAC26785.1   phosphoglycerate kinase precursor [Solanum tuberosum];emb   CBN64586.1   unnamed protein product [Solanum tuberosum]
24,52	NaN	24,253	24,8766	24,40321	23,8813	NaN	24,05	23,6753	23,637	2,286	0,70256	ref   XP_006339531.1   PREDICTED: (+)-neomenthol dehydrogenase-like [Solanum tuberosum]
27,02	27,4316	26,8061	27,1234	27,35792	26,7761	26,763	26,333	26,1793	26,077	2,339	0,72153	ref   XP_006363582.1   PREDICTED: probable aldo-keto reductase 2 isoform X1 [Solanum tuberosum];ref   XP_006363583.1   PREDICTED: probable aldo-keto reductase 2 isoform X2 [Solanum tuberosum]

Fortsetzung Tabelle E2: Auflistung der signifikant verschiedenen Proteine des Vergleichs KK gegen TK.

KK_12	KK_16	KK_20	KK_24	KK_A3	TK_10	TK_14	TK_18	TK_22	TK_A1	-Log Student's T-test p-value KK_TK	Student's T-test Difference KK_TK	Fasta headers
26,2	26,5709	26,0106	26,455	26,27851	25,3339	25,817	NaN	25,847	25,287	2,4115	0,73181	ref   XP_006341098.1   PREDICTED: uncharacterized protein LOC102599218 [Solanum tuberosum]
25,33	25,5214	26,1689	25,3924	25,30563	24,9641	24,899	NaN	24,8319	24,491	2,0848	0,74611	ref   XP_006352155.1   PREDICTED: peroxisomal fatty acid beta-oxidation multifunctional protein AIM1-like isoform X2 [Solanum tuberosum]
26,87	26,7156	27,5663	27,1701	27,27329	26,5934	26,36	26,184	26,1849	26,52	2,6265	0,75169	ref   XP_006338468.1   PREDICTED: aldose 1-epimerase-like [Solanum tuberosum]
27,56	27,6044	27,179	27,9157	27,42806	26,8601	26,824	26,961	26,3888	26,788	2,9688	0,77343	ref   XP_006364109.1   PREDICTED: acyl-coenzyme A oxidase 3, peroxisomal isoform X2 [Solanum tuberosum];ref   XP_006364108.1   PREDICTED: acyl-coenzyme A oxidase 3, peroxisomal isoform X1 [Solanum tuberosum];ref   XP_015159259.1   PREDICTED: acyl-coenzy
25,88	25,7478	26,6111	26,8612	26,34892	25,6363	25,568	25,43	25,5861	25,226	2,1322	0,79968	ref   XP_015169663.1   PREDICTED: FAD-dependent urate hydroxylase-like isoform X2 [Solanum tuberosum];ref   XP_015169662.1   PREDICTED: FAD-dependent urate hydroxylase-like isoform X1 [Solanum tuberosum]
30,77	30,3197	30,5149	30,6067	30,86563	29,9881	29,375	29,456	29,9797	30,092	2,8145	0,8376	ref   XP_015159896.1   PREDICTED: polyphenol oxidase D, chloroplastic isoform X1 [Solanum tuberosum]

## Fortsetzung Tabelle E2: Auflistung der signifikant verschiedenen Proteine des Vergleichs KK gegen TK.

KK_12	KK_16	KK_20	KK_24	KK_A3	TK_10	TK_14	TK_18	TK_22	TK_A1	-Log Student's T-test p-value KK_TK	Student's T-test Difference KK_TK	Fasta headers
31,76	32,3219	31,9404	32,0213	32,04221	31,4934	30,999	30,982	31,0778	31,048	3,8679	0,8968	ref   XP_006356134.1   PREDICTED: acid phosphatase 1-like [Solanum tuberosum]
28,8	28,7078	29,3115	28,973	28,48838	27,9596	28,041	28,11	28,2924	27,205	2,4109	0,93418	gb   ABB43241.1   cytochrome c oxidase subunit II (mitochondrion) [Solanum tuberosum]
26,35	26,1247	26,5207	26,8734	27,0071	25,6783	25,498	25,82	25,3321	25,765	3,0512	0,95673	ref   XP_006349240.1   PREDICTED: basic 7S globulin-like [Solanum tuberosum]
27,03	26,8355	25,8699	26,7595	27,02823	25,4448	26	25,884	25,6219	25,458	2,531	1,02196	ref   XP_006346969.1   PREDICTED: UPF0261 protein BPP1817 [Solanum tuberosum]
27,82	28,3134	28,468	27,8973	28,22223	27,4689	26,98	26,348	27,0656	27,696	2,3645	1,03247	gb   ABA40463.1   elongation factor-like protein [Solanum tuberosum]
26,9	26,6388	26,4922	27,3707	27,10809	25,6765	26,197	25,746	25,5139	25,979	3,2107	1,07889	ref   XP_006348687.1   PREDICTED: probable inactive purple acid phosphatase 1 [Solanum tuberosum]
27,11	27,5296	27,9132	28,0444	27,11991	26,704	26,606	26,753	25,8893	26,187	2,6065	1,11499	ref   XP_006363372.1   PREDICTED: 12S seed storage globulin 1-like [Solanum tuberosum]
32,57	32,8442	32,547	32,5944	32,67263	31,5687	31,178	31,615	31,4462	31,596	5,6479	1,1643	ref   XP_006362453.1   PREDICTED: probable inactive purple acid phosphatase 27 [Solanum tuberosum]
31,15	31,5351	31,1257	31,0053	31,07048	30,0356	30,411	29,893	29,6597	29,769	4,2204	1,2245	ref   XP_006347203.1   PREDICTED: probable aquaporin TIP1-1 [Solanum tuberosum]
28,9	28,7826	29,7084	28,9943	29,36024	28,0902	27,142	28,282	27,6547	28,135	2,871	1,28912	ref   XP_006348413.1   PREDICTED: probable 2-oxoglutarate-dependent dioxygenase AOP1.2 [Solanum tuberosum]

## Fortsetzung Tabelle E2: Auflistung der signifikant verschiedenen Proteine des Vergleichs KK gegen TK.

KK_12	KK_16	KK_20	KK_24	KK_A3	TK_10	TK_14	TK_18	TK_22	TK_A1	-Log Student's T-test p-value KK_TK	Student's T-test Difference KK_TK	Fasta headers
30,6	31,0652	31,5301	30,9458	30,59272	29,818	30,074	29,515	29,125	29,077	3,2384	1,42546	ref   XP_006347771.1   PREDICTED: annexin D4-like isoform X1 [Solanum tuberosum];ref   XP_006347772.1   PREDICTED: annexin D4-like isoform X2 [Solanum tuberosum]
28,9	28,4831	28,5649	28,4834	28,61182	27,8839	26,58	27,096	27,1022	26,914	3,7533	1,49322	ref   XP_006363162.1   PREDICTED: apyrase-like [Solanum tuberosum];ref   XP_006363161.1   PREDICTED: apyrase-like [Solanum tuberosum]
26,7	27,8437	26,711	26,9825	27,0427	25,6499	25,534	25,576	25,726	25,127	3,7574	1,5334	ref   XP_006358620.1   PREDICTED: poly(U)-specific endoribonuclease-B [Solanum tuberosum]
27,05	25,2516	25,8254	26,5711	26,8565	24,6628	23,886	25,334	25,0027	24,93	2,2325	1,54735	ref   XP_006350019.1   PREDICTED: acetyl-CoA-benzylalcohol acetyltransferase-like [Solanum tuberosum]
26,27	26,2466	27,1754	27,7213	26,89608	25,9764	25,417	25,391	24,2582	25,376	2,393	1,57784	ref   XP_006346175.1   PREDICTED: polygalacturonase inhibitor-like [Solanum tuberosum];gb   AAT77429.1   polygalacturonase inhibitor protein precursor, partial [Solanum tuberosum]
27,91	27,4322	28,3322	27,5275	28,3093	26,5459	25,145	NaN	26,3298	26,776	2,5198	1,70356	ref   XP_006348414.1   PREDICTED: probable 2-oxoglutarate-dependent dioxygenase AOP1 [Solanum tuberosum]
27,44	26,438	26,6779	28,0888	26,71358	25,4418	25,698	NaN	25,1037	24,444	2,5671	1,90064	sp   Q43189.1   LOX13_SOLTU RecName: Full=Probable linoleate 9S-lipoxygenase 3;gb   AAB67858.1   lipoxygenase [Solanum tuberosum];emb   CAA64765.1   lipoxygenase, partial [Solanum tuberosum]

## Fortsetzung Tabelle E2: Auflistung der signifikant verschiedenen Proteine des Vergleichs KK gegen TK.

KK_12	KK_16	KK_20	KK_24	KK_A3	TK_10	TK_14	TK_18	TK_22	TK_A1	-Log Student's T-test p-value KK_TK	Student's T-test Difference KK_TK	Fasta headers
30,74	30,3326	30,3527	30,9438	30,82987	28,7083	27,967	29,07	28,8005	28,442	4,7578	2,04142	ref   XP_015162131.1   PREDICTED: acetyl-CoA-benzylalcohol acetyltransferase-like [Solanum tuberosum];ref   XP_006342687.1   PREDICTED: acetyl-CoA-benzylalcohol acetyltransferase-like [Solanum tuberosum]
27,17	27,1261	27,3568	27,4918	27,27258	25,2949	25,483	23,875	25,0847	25,184	4,3025	2,29902	ref   XP_006353145.1   PREDICTED: probable mannitol dehydrogenase [Solanum tuberosum]
28,49	28,9426	28,2828	29,2565	30,25923	27,4011	26,319	NaN	25,7516	25,196	2,8262	2,88015	ref   XP_006353920.1   PREDICTED: kunitz-type serine protease inhibitor DrTI-like [Solanum tuberosum]
29,9	29,0015	29,7874	30,8293	29,27166	26,3943	26,721	24,17	26,4263	26,081	3,8756	3,79935	sp   O22508.1   LOX18_SOLTU RecName: Full=Probable linoleate 9S-lipoxygenase 8;gb   AAB81595.1   lipoxygenase [Solanum tuberosum];emb   CAA64769.1   lipoxygenase, partial [Solanum tuberosum]

## E 3.2 Auflistung der signifikant verschieden abundanten Proteine des paarweisen Vergleichs von KK gegen KI

**Tabelle E3: Zusammenfassung der signifikant verschieden abundanten Proteine des Vergleichs der Proben KK gegen KI.** Signifikanzniveau des Student's T-test  $-\log > 2$ , KK: `Karolin` Kontrolle, KI: `Karolin` inokuliert.

KI_11	KI_15	KI_19	KI_23	KI_A4	KK_12	KK_16	KK_20	KK_24	KK_A3	-Log Student's T-test p-value KI_KK	Student's T-test Difference KI_KK	Fasta headers
28,185	27,03	28,004	27,782	27,8276	28,585	28,311	28,521	28,7388	28,668	2,2727	-0,7998	ref   XP_006349906.2   PREDICTED: apyrase-like [Solanum tuberosum];ref   XP_006349910.1   PREDICTED: apyrase-like isoform X2 [Solanum tuberosum];ref   XP_006349909.1   PREDICTED: apyrase-like isoform X1 [Solanum tuberosum]
24,166	24,01	24,608	24,5596	24,2655	25,183	25,217	NaN	24,8847	25,012	2,8697	-0,7521	ref   XP_015160240.1   PREDICTED: 2-isopropylmalate synthase A-like isoform X2 [Solanum tuberosum];ref   XP_006366147.1   PREDICTED: 2-isopropylmalate synthase A-like isoform X1 [Solanum tuberosum]
28,367	28,51	28,15	28,0404	28,1073	29,097	28,699	28,912	29,2856	28,802	3,1397	-0,7246	ref   XP_006366298.1   PREDICTED: trans-resveratrol di-O-methyltransferase-like [Solanum tuberosum]
32,023	32,17	32,036	31,6753	31,7775	32,567	32,844	32,547	32,5944	32,673	3,8005	-0,708	ref   XP_006362453.1   PREDICTED: probable inactive purple acid phosphatase 27 [Solanum tuberosum]
26,71	26,24	26,499	26,0462	26,7651	27,262	27,181	26,995	27,1725	27,18	2,9258	-0,7054	ref   XP_006346090.1   PREDICTED: proteasome activator subunit 4 [Solanum tuberosum]
31,344	30,58	30,688	30,46	31,1303	31,732	31,488	31,238	31,5464	31,546	2,1412	-0,6698	ref   XP_006339952.1   PREDICTED: vicianin hydrolase-like [Solanum tuberosum];ref   XP_006341337.1   PREDICTED: vicianin hydrolase-like [Solanum tuberosum]

Fortsetzung Tabelle E3: Zusammenfassung der signifikant verschieden abundanten Proteine des Vergleichs der Proben KK gegen KI.

KI_11	KI_15	KI_19	KI_23	KI_A4	KK_12	KK_16	KK_20	KK_24	KK_A3	-Log Student's T-test p-value KI_KK	Student's T-test Difference KI_KK	Fasta headers
25,622	25,55	25,449	NaN	25,4373	NaN	25,98	25,989	26,1733	NaN	3,1038	-0,5337	ref   XP_006340554.1   PREDICTED: uncharacterized protein LOC102583576 isoform X2 [Solanum tuberosum];ref   XP_015159516.1   PREDICTED: uncharacterized protein LOC102583576 isoform X1 [Solanum tuberosum]
26,897	26,68	26,877	27,0554	26,9812	27,427	27,095	27,556	27,5453	27,444	2,9326	-0,515	ref   XP_006364544.1   PREDICTED: sterol 3-beta-glucosyltransferase UGT80A2-like [Solanum tuberosum]
27,259	27,06	27,08	26,8934	26,6175	27,839	27,473	27,536	27,2947	27,28	2,0177	-0,5019	ref   XP_006360232.1   PREDICTED: L-ascorbate oxidase homolog [Solanum tuberosum]
25,144	25,64	25,161	25,0081	25,3691	25,531	25,743	25,667	25,949	25,664	2,0468	-0,4459	ref   XP_006362066.1   PREDICTED: subtilisin-like protease SBT1.7 [Solanum tuberosum]
27,452	27,41	27,615	27,3719	27,6353	28,148	27,551	27,937	27,8639	28,119	2,125	-0,4269	ref   XP_006339893.1   PREDICTED: uncharacterized protein LOC102591281 [Solanum tuberosum]
26,131	25,89	26,229	26,3255	26,5706	26,752	26,73	26,612	26,5815	26,563	2,1128	-0,4181	ref   XP_006354028.1   PREDICTED: apoptotic chromatin condensation inducer in the nucleus-like [Solanum tuberosum]
26,767	26,64	26,34	26,5438	26,3436	26,794	26,885	27,023	27,1572	26,786	2,204	-0,4028	emb   CAA63783.1   NADH dehydrogenase subunit II, partial (mitochondrion) [Solanum tuberosum]
24,353	24,58	24,52	24,6131	24,3488	24,78	24,623	24,684	24,8986	24,722	2,1153	-0,2582	ref   XP_006344418.1   PREDICTED: uncharacterized protein LOC102593974 [Solanum tuberosum]

Fortsetzung Tabelle E3: Zusammenfassung der signifikant verschieden abundanten Proteine des Vergleichs der Proben KK gegen KI.

KI_11	KI_15	KI_19	KI_23	KI_A4	KK_12	KK_16	KK_20	KK_24	KK_A3	-Log Student's T-test p-value KI_KK	Student's T-test Difference KI_KK	Fasta headers
30,891	30,82	30,974	30,9081	30,7557	31,174	31,146	31,104	31,1618	31,046	3,3964	-0,2564	ref   XP_006344664.1   PREDICTED: probable xyloglucan endotransglucosylase/hydrolase 1 [Solanum tuberosum]
26,871	26,85	27,023	26,83	26,8074	27,094	26,964	27,213	27,1693	27,091	2,4281	-0,2302	ref   XP_006338069.1   PREDICTED: AP-4 complex subunit mu isoform X2 [Solanum tuberosum];ref   XP_006338068.1   PREDICTED: AP-4 complex subunit mu isoform X1 [Solanum tuberosum]
28,368	28,57	28,611	28,5595	28,3934	28,68	28,704	28,823	28,7583	28,63	2,2027	-0,2191	ref   XP_006366781.1   PREDICTED: ER membrane protein complex subunit 1 [Solanum tuberosum]
27,002	27,1	27	26,9228	27,0337	27,173	27,144	27,212	27,3286	27,211	2,8668	-0,2027	ref   XP_006350070.1   PREDICTED: transmembrane 9 superfamily member 11-like [Solanum tuberosum]
25,743	NaN	25,718	25,7822	25,7866	26,105	25,853	25,949	25,8909	26	2,2185	-0,202	ref   XP_015169888.1   PREDICTED: translocase of chloroplast 159, chloroplastic [Solanum tuberosum]
30,13	30,22	30,093	30,0741	30,357	30,369	30,305	30,399	30,4043	30,376	2,1154	-0,1949	ref   XP_006351084.1   PREDICTED: guanosine nucleotide diphosphate dissociation inhibitor 2-like [Solanum tuberosum]
25,201	25,19	25,394	25,0672	25,2062	25,126	24,961	24,971	24,815	24,971	2,0143	0,24278	ref   XP_006340027.1   PREDICTED: rhomboid-like protein 19 [Solanum tuberosum]
26,552	26,79	26,698	26,6039	26,7069	26,351	26,591	26,384	26,3119	26,447	2,3718	0,25245	ref   XP_006347624.1   PREDICTED: 3-oxoacyl-[acyl-carrier-protein] synthase 3 A, chloroplastic-like [Solanum tuberosum]

Fortsetzung Tabelle E3: Zusammenfassung der signifikant verschieden abundanten Proteine des Vergleichs der Proben KK gegen KI.

KI_11	KI_15	KI_19	KI_23	KI_A4	KK_12	KK_16	KK_20	KK_24	KK_A3	-Log Student's T-test p-value KI_KK	Student's T-test Difference KI_KK	Fasta headers
25,044	24,83	24,738	24,8399	NaN	24,557	24,595	NaN	24,5836	24,678	2,004	0,25884	ref   XP_006344583.1   PREDICTED: tropinone reductase homolog At5g06060-like [Solanum tuberosum]
27,502	27,3	27,586	27,2047	27,4848	27,081	26,779	27,177	26,8886	27,14	2,3242	0,40249	ref   XP_006367458.1   PREDICTED: 3-isopropylmalate dehydratase small subunit 3-like [Solanum tuberosum]
25,392	NaN	25,371	25,5473	25,5033	25,209	24,935	25,241	24,8796	24,89	2,4505	0,42249	ref   XP_006367687.1   PREDICTED: translin [Solanum tuberosum]
25,818	25,37	25,422	25,6063	26,0096	25,291	25,129	25,23	25,1666	25,25	2,0806	0,43159	ref   XP_006340642.1   PREDICTED: soluble inorganic pyrophosphatase 1 [Solanum tuberosum]
25,715	25,71	26,221	26,1629	26,0793	25,471	25,538	25,457	25,2418	25,767	2,0716	0,4825	ref   NP_001305472.1   phosphoglycerate kinase, chloroplastic [Solanum tuberosum];gb   AAC26785.1   phosphoglycerate kinase precursor [Solanum tuberosum]
NaN	23,66	23,671	23,5448	23,5185	23,22	NaN	22,981	NaN	NaN	2,2229	0,49747	ref   XP_006348894.1   PREDICTED: ras-related protein YPT3 [Solanum tuberosum]
26,814	26,97	27,508	27,1339	27,3084	26,559	26,515	26,794	26,4675	26,756	2,2878	0,52865	ref   XP_006366659.1   PREDICTED: eukaryotic translation initiation factor 6-2 [Solanum tuberosum]
26,618	26,22	26,021	25,9373	26,5455	25,549	25,851	25,732	25,6507	25,738	2,3277	0,56362	ref   XP_006339159.1   PREDICTED: 2-Cys peroxiredoxin BAS1, chloroplastic [Solanum tuberosum]

Fortsetzung Tabelle E3: Zusammenfassung der signifikant verschieden abundanten Proteine des Vergleichs der Proben KK gegen KI.

KI_11	KI_15	KI_19	KI_23	KI_A4	KK_12	KK_16	KK_20	KK_24	KK_A3	-Log Student's T-test p-value KI_KK	Student's T-test Difference KI_KK	Fasta headers
29,557	29,49	29,884	29,908	29,859	29,158	29,017	29,076	29,0289	29,449	2,9506	0,59354	sp   P56336.1   IF5A4_SOLTU RecName: Full=Eukaryotic translation initiation factor 5A-4;Short=eIF-5A-4;AltName: Full=eIF-4D;dbj   BAA20878.1   eukaryotic initiation factor 5A4 [Solanum tuberosum];gb   ABA46751.1   eukaryotic initiation factor 5A4-like
25,469	25,44	25,71	25,518	25,5942	25,042	24,804	24,896	24,8259	25,087	4,4361	0,61474	ref   XP_006356878.1   PREDICTED: calcyclin-binding protein-like [Solanum tuberosum]
24,759	24,6	24,932	24,8478	24,4136	23,886	NaN	24,014	NaN	24,348	2,1262	0,62816	ref   NP_001275630.1   uncharacterized protein LOC102597373 [Solanum tuberosum];gb   AFW90618.1   transmembrane and coiled-coil domains protein [Solanum tuberosum]
27,375	27,03	27,867	27,4462	27,4768	26,607	26,693	26,426	26,5677	27,29	2,1515	0,72157	ref   XP_006349349.1   PREDICTED: 40S ribosomal protein S12-like [Solanum tuberosum]
26,469	27,12	27,299	27,0501	27,2844	25,961	26,096	26,662	26,1963	26,613	2,1394	0,73935	ref   XP_006344766.1   PREDICTED: ATP-dependent Clp protease proteolytic subunit 5, chloroplastic [Solanum tuberosum]
27,096	27,32	27,447	27,2447	27,6101	25,929	26,252	26,833	26,7187	26,991	2,2199	0,79885	ref   XP_006365336.1   PREDICTED: ATP synthase subunit delta, mitochondrial [Solanum tuberosum]
26,723	26,55	27,103	26,6771	27,1269	25,68	25,523	26,048	26,1702	26,509	2,4145	0,85008	ref   XP_006343995.1   PREDICTED: probable phospholipid hydroperoxide glutathione peroxidase [Solanum tuberosum]

Fortsetzung Tabelle E3: Zusammenfassung der signifikant verschieden abundanten Proteine des Vergleichs der Proben KK gegen KI.

KI_11	KI_15	KI_19	KI_23	KI_A4	KK_12	KK_16	KK_20	KK_24	KK_A3	-Log Student's T-test p-value KI_KK	Student's T-test Difference KI_KK	Fasta headers
25,841	25,76	25,696	25,5406	26,0787	24,953	24,859	24,779	24,939	25,127	4,3691	0,85103	ref   XP_006364970.1   PREDICTED: ubiquitin-fold modifier-conjugating enzyme 1 [Solanum tuberosum]
28,419	28,78	28,857	28,7941	28,8111	27,667	27,607	27,794	27,6413	28,61	2,5401	0,86727	ref   XP_006345455.1   PREDICTED: ATP synthase subunit O, mitochondrial [Solanum tuberosum]
29,62	29,27	30,442	29,9584	30,2358	28,868	28,725	29,079	28,9946	29,431	2,1973	0,88566	gb   ABB55398.1   40S ribosomal protein S10-like [Solanum tuberosum];ref   NP_001275161.1   40S ribosomal protein S10-like [Solanum tuberosum]
32,4	32,19	32,482	32,5185	32,6726	31,432	31,4	31,429	31,5207	32,002	3,7288	0,8964	gb   ABB29940.1   cyclophilin-like [Solanum tuberosum];ref   NP_001275605.1   peptidyl-prolyl cis-trans isomerase-like [Solanum tuberosum];gb   AAD22975.1   AF126551_1 cyclophilin [Solanum tuberosum];gb   AFW90623.1   stress responsive cyclophilin
27,373	27,14	28,147	27,6689	27,9141	26,64	26,328	27	26,7002	27,027	2,4596	0,90931	gb   ABB72819.1   40S ribosomal protein S10-like protein [Solanum tuberosum];gb   ABB55361.1   40S ribosomal protein S10-like [Solanum tuberosum];ref   NP_001275178.1   40S ribosomal protein S10-like [Solanum tuberosum]
28,401	28,2	28,411	28,1405	28,6806	27,011	26,775	27,765	27,462	28,185	2,0434	0,92734	ref   XP_006364367.1   PREDICTED: probable glutathione S-transferase [Solanum tuberosum]
28,496	28,07	28,765	28,5744	28,4265	27,24	27,421	27,454	27,231	28,347	2,3596	0,92844	ref   XP_006346604.1   PREDICTED: 40S ribosomal protein S12-like [Solanum tuberosum]

Fortsetzung Tabelle E3: Zusammenfassung der signifikant verschieden abundanten Proteine des Vergleichs der Proben KK gegen KI.

KI_11	KI_15	KI_19	KI_23	KI_A4	KK_12	KK_16	KK_20	KK_24	KK_A3	-Log Student's T-test p-value KI_KK	Student's T-test Difference KI_KK	Fasta headers
26,215	26,31	26,727	26,7659	26,3832	25,514	25,327	25,705	25,3586	25,801	3,7008	0,93966	ref   XP_006352968.1   PREDICTED: uncharacterized protein LOC102584190 [Solanum tuberosum]
27,306	27,4	27,438	27,3059	27,4193	26,491	25,851	26,26	26,3254	27,044	2,9826	0,97956	gb   ABA46770.1   small GTP-binding protein Sar1BNt-like protein [Solanum tuberosum];ref   NP_001274867.1   small GTP-binding protein Sar1BNt-like protein [Solanum tuberosum]
27,584	27,92	28,073	28,1989	28,2824	26,903	26,732	27,08	26,6258	27,701	2,6631	1,00326	ref   XP_006363774.1   PREDICTED: photosynthetic NDH subunit of lumenal location 5, chloroplastic [Solanum tuberosum]
28,865	28,26	28,911	28,8489	29,1428	27,685	27,129	27,929	27,7512	28,517	2,2542	1,00328	ref   XP_006341987.1   PREDICTED: thioredoxin H-type 1 [Solanum tuberosum]
26,608	26,78	26,117	26,5553	26,9391	25,299	24,93	25,731	25,7407	26,223	2,3508	1,01576	dbj   BAC23036.1   glutathion S-transferase, partial [Solanum tuberosum];sp   P32111.1   GSTX1_SOLTU RecName: Full=Probable glutathione S-transferase;AltName: Full=Pathogenesis-related protein 1
29,059	28,94	29,537	29,1908	29,6633	27,966	27,682	28,447	27,9978	29,09	2,211	1,04162	gb   ABB86269.1   40S ribosomal protein S15-like [Solanum tuberosum];gb   ABB86257.1   40S ribosomal protein S15-like [Solanum tuberosum];ref   NP_001274973.1   40S ribosomal protein S15-like [Solanum tuberosum]
28,082	28,13	27,778	28,3785	27,8445	27,354	26,522	26,456	26,7465	27,917	2,0854	1,04269	ref   XP_006367788.1   PREDICTED: actin-depolymerizing factor 2-like [Solanum tuberosum]

Fortsetzung Tabelle E3: Zusammenfassung der signifikant verschieden abundanten Proteine des Vergleichs der Proben KK gegen KI.

KI_11	KI_15	KI_19	KI_23	KI_A4	KK_12	KK_16	KK_20	KK_24	KK_A3	-Log Student's T-test p-value KI_KK	Student's T-test Difference KI_KK	Fasta headers
26,893	26,45	27,104	26,9763	26,7409	26,081	25,168	25,609	25,5098	26,573	2,3319	1,04483	ref   XP_006354030.1   PREDICTED: 60S ribosomal protein L30-like [Solanum tuberosum]
28,712	28,67	29,214	28,8085	29,3243	27,706	27,184	27,906	27,8735	28,712	2,2924	1,07012	gb   ABB29944.1   GTPase-like [Solanum tuberosum];ref   NP_001275076.1   GTP-binding protein SAR2-like [Solanum tuberosum];gb   ABB16973.1   GTPase-like protein [Solanum tuberosum];ref   NP_001275166.1   GTPase-like protein [Solanum tuberosum]
25,342	25,82	25,96	25,5213	25,3574	24,295	23,859	24,574	24,2565	25,562	2,084	1,08972	ref   XP_006343544.1   PREDICTED: ADP-ribosylation factor 1 [Solanum tuberosum]
30,226	29,79	30,613	30,3385	30,3423	29,045	28,334	29,504	28,8697	29,913	2,2415	1,12839	gb   ABA46765.1   unknown [Solanum tuberosum];ref   NP_001275126.1   uncharacterized protein LOC102577535 [Solanum tuberosum];ref   XP_006350987.1   PREDICTED: 40S ribosomal protein S18 [Solanum tuberosum]
28,9	29,03	28,725	28,9922	29,1007	27,867	27,095	27,555	27,4482	28,999	2,0804	1,15618	ref   XP_006344361.1   PREDICTED: CBS domain-containing protein CBSX3, mitochondrial [Solanum tuberosum]
27,228	27,62	27,211	27,6945	27,5706	25,123	26,324	26,289	26,5111	27,035	2,2	1,20847	gb   AAM22686.1   AF500589_1 pathogenesis related protein 10, partial [Solanum tuberosum]
24,909	24,62	25,823	25,272	25,6424	23,844	23,524	23,991	23,813	24,761	2,4984	1,26708	ref   XP_006347668.1   PREDICTED: peptidyl-prolyl cis-trans isomerase CYP22 [Solanum tuberosum]

Fortsetzung Tabelle E3: Zusammenfassung der signifikant verschieden abundanten Proteine des Vergleichs der Proben KK gegen KI.

KI_11	KI_15	KI_19	KI_23	KI_A4	KK_12	KK_16	KK_20	KK_24	KK_A3	-Log Student's T-test p-value KI_KK	Student's T-test Difference KI_KK	Fasta headers
29,953	29,87	30,93	30,3139	30,5494	28,826	28,114	29,077	28,7658	30,169	2,0568	1,33384	gb   ABC01912.1   ribosomal protein S14-like protein [Solanum tuberosum];gb   ABB87124.1   hypothetical protein [Solanum tuberosum];ref   XP_006341085.1   PREDICTED: 40S ribosomal protein S14-2 [Solanum tuberosum]
NaN	24,79	24,78	24,9337	25,2165	NaN	23,545	NaN	23,5463	NaN	3,0906	1,38474	ref   XP_006359696.1   PREDICTED: rac-like GTP-binding protein 5 [Solanum tuberosum]
27,749	27,92	NaN	27,4229	27,8261	26,277	26,103	25,555	26,2657	27,521	2,0985	1,3854	ref   NP_001275628.1   wound-induced protein WIN2 precursor [Solanum tuberosum];gb   AFX67005.1   wound-induced protein WIN2 [Solanum tuberosum];gb   AFW90614.1   wound-induced protein WIN1 [Solanum tuberosum]
26,904	26,53	27,329	26,6283	26,9345	25,106	24,24	25,755	25,2336	26,675	2,059	1,46321	ref   XP_006366566.1   PREDICTED: small nuclear ribonucleoprotein Smd3b-like [Solanum tuberosum];ref   XP_006343373.1   PREDICTED: small nuclear ribonucleoprotein Smd3b-like [Solanum tuberosum]
27,196	26,46	27,161	27,1722	27,2957	25,178	24,722	25,739	25,5483	26,689	2,4643	1,48171	ref   XP_006359316.1   PREDICTED: proteasome subunit beta type-3-A [Solanum tuberosum]
27,851	27,52	27,998	27,6369	26,9829	25,688	25,097	26,698	25,875	27,19	2,1669	1,48744	ref   XP_006349402.1   PREDICTED: basic blue protein-like [Solanum tuberosum]
29,073	28,9	29,825	28,7317	29,1202	27,226	26,485	28,064	27,3711	28,863	2,0567	1,52881	gb   ABA40467.1   glycoprotein-like protein [Solanum tuberosum];ref   NP_001275005.1   60S ribosomal protein L14-1-like [Solanum tuberosum]

Fortsetzung Tabelle E3: Zusammenfassung der signifikant verschieden abundanten Proteine des Vergleichs der Proben KK gegen KI.

KI_11	KI_15	KI_19	KI_23	KI_A4	KK_12	KK_16	KK_20	KK_24	KK_A3	-Log Student's T-test p-value KI_KK	Student's T-test Difference KI_KK	Fasta headers
28,731	28,3	28,155	28,6119	28,4889	26,425	25,583	26,339	27,4921	28,236	2,0459	1,64176	ref   XP_006345574.1   PREDICTED: acidic endochitinase [Solanum tuberosum]
24,738	24,85	25,897	24,8502	25,7326	23,133	22,649	23,612	23,3727	24,661	2,4981	1,72885	ref   XP_006360642.1   PREDICTED: histone deacetylase complex subunit SAP18 [Solanum tuberosum]
27,372	27,14	25,946	27,1815	27,2455	24,676	NaN	24,945	25,447	25,035	3,2502	1,95174	ref   NP_001305629.1   glucan endo-1,3-beta-glucosidase, acidic isoform PR-Q-like precursor [Solanum tuberosum];gb   AGI42666.1   beta-1,3-glucanase class III, partial [Solanum tuberosum];gb   AFU52648.1   beta-1,3-glucanase 13 [Solanum tuberosum]
28,025	27,96	27,564	28,2253	28,2233	24,914	25,339	25,053	26,0039	26,759	3,7584	2,38561	ref   NP_001275608.1   pathogenesis-related protein P2-like precursor [Solanum tuberosum];gb   AFW90570.1   pathogenesis-related protein P2 [Solanum tuberosum];emb   CAC51360.1   unnamed protein product, partial [Solanum tuberosum]

## E 3.3 Zusammenfassung der signifikant verschieden abundanten Proteine des Vergleichs TI gegen TK

**Tabelle E4: Auflistung der signifikant verschieden abundanten Proteine des Vergleichs TI gegen TK.** Signifikanzniveau des Student's T-test  $-\log > 2$ , TI: 'Tomensa' inokuliert, TK: 'Tomensa' Kontrolle.

TI_13	TI_17	TI_21	TI_9	TI_A2	TK_10	TK_14	TK_18	TK_22	TK_A1	-Log Student's T-test p-value TI_TK	Student's T-test Difference TI_TK	Fasta headers
24,149	NaN	24,1338	24,433	NaN	25,961	NaN	NaN	NaN	25,6428	2,545	-1,563	ref   XP_006362654.1   PREDICTED: probable NADH dehydrogenase [ubiquinone] 1 alpha subcomplex subunit 5, mitochondrial [Solanum tuberosum]
24,8658	24,971	24,935	24,312	NaN	26,3776	25,148	26,653	25,8508	26,289	2,257	-1,293	ref   XP_015166068.1   PREDICTED: GDSL esterase/lipase CPRD49-like [Solanum tuberosum]
25,5661	25,853	26,1023	24,171	24,8172	26,8359	26,623	26,441	26,2958	26,5524	2,029	-1,248	gb   ADD14631.1   expansin precursor, partial [Solanum tuberosum];ref   XP_006341021.1   PREDICTED: expansin-A3 [Solanum tuberosum];gb   ADD14636.1   expansin precursor, partial [Solanum tuberosum]
26,8611	26,757	26,1756	25,959	26,5035	27,7324	26,91	27,776	27,4134	28,0482	2,608	-1,125	ref   XP_006341715.2   PREDICTED: uncharacterized protein LOC102601890 [Solanum tuberosum]
30,8822	30,02	29,829	30,032	29,6217	31,4934	30,999	30,982	31,0778	31,0482	2,666	-1,043	ref   XP_006356134.1   PREDICTED: acid phosphatase 1-like [Solanum tuberosum]
26,8298	26,08	26,1126	25,458	25,5652	27,0312	26,485	27,274	26,8037	27,4088	2,006	-0,992	ref   XP_015168498.1   PREDICTED: uncharacterized protein LOC102588389 isoform X2 [Solanum tuberosum]

Fortsetzung Tabelle E4: Auflistung der signifikant verschieden abundanten Proteine des Vergleichs TI gegen TK.

TI_13	TI_17	TI_21	TI_9	TI_A2	TK_10	TK_14	TK_18	TK_22	TK_A1	-Log Student's T-test p-value TI_TK	Student's T-test Difference TI_TK	Fasta headers
27,6712	27,733	26,7115	26,793	26,5171	28,0852	28,015	27,676	28,0134	28,1508	2,002	-0,903	ref   XP_006349432.1   PREDICTED: cruciferin PGCRURSE5-like isoform X1 [Solanum tuberosum];ref   XP_015165044.1   PREDICTED: 12S seed storage protein CRD-like isoform X2 [Solanum tuberosum]
31,237	30,954	30,684	30,148	30,0873	31,5687	31,178	31,615	31,4462	31,5956	2,158	-0,859	ref   XP_006362453.1   PREDICTED: probable inactive purple acid phosphatase 27 [Solanum tuberosum]
28,1359	27,643	27,5413	26,933	26,9733	28,1716	28,121	28,32	28,2725	28,4523	2,118	-0,822	ref   XP_015166519.1   PREDICTED: tropinone reductase homolog At5g06060-like isoform X2 [Solanum tuberosum];ref   XP_006352697.1   PREDICTED: tropinone reductase homolog At5g06060-like isoform X1 [Solanum tuberosum]
24,1658	24,472	NaN	23,893	NaN	24,9039	24,748	25,212	NaN	25,1273	2,146	-0,821	ref   XP_006341358.1   PREDICTED: stromal cell-derived factor 2-like protein [Solanum tuberosum]
25,7283	26,241	25,8657	26,355	26,1889	27,3653	26,596	27,061	26,8317	26,5849	2,568	-0,812	ref   XP_006354447.1   PREDICTED: heterogeneous nuclear ribonucleoprotein 1 [Solanum tuberosum]
26,0749	26,032	25,8322	26,236	26,1112	27,4721	26,664	26,681	26,6698	26,5084	2,43	-0,742	ref   XP_006346815.1   PREDICTED: aspartic proteinase Asp1-like [Solanum tuberosum]

Fortsetzung Tabelle E4: Auflistung der signifikant verschieden abundanten Proteine des Vergleichs TI gegen TK.

TI_13	TI_17	TI_21	TI_9	TI_A2	TK_10	TK_14	TK_18	TK_22	TK_A1	-Log Student's T-test p-value TI_TK	Student's T-test Difference TI_TK	Fasta headers
25,5141	25,754	25,674	25,969	25,0337	26,402	26,156	26,641	26,188	26,1506	2,35	-0,719	ref   XP_006361864.1   PREDICTED: signal peptidase complex subunit 3B-like [Solanum tuberosum]
28,5351	28,211	28,2667	28,574	28,331	29,1949	28,765	29,172	28,7063	29,5175	2,476	-0,687	ref   NP_001305530.1   peptidyl-prolyl cis-trans isomerase CYP19-4 precursor [Solanum tuberosum]
28,2937	28,352	28,2808	28,002	27,6409	28,8772	28,912	28,995	28,5664	28,6505	2,64	-0,686	emb   CAA63968.1   pom30 [Solanum tuberosum];gb   ABB16970.1   POM30-like protein [Solanum tuberosum]
25,3516	25,358	25,4097	24,977	NaN	26,3235	25,838	26,18	25,4541	25,9644	2,023	-0,678	ref   XP_006338471.1   PREDICTED: aldose 1-epimerase-like isoform X5 [Solanum tuberosum]
27,3295	27,426	26,922	26,743	27,4391	28,0198	27,874	27,756	27,7006	27,629	2,366	-0,624	ref   XP_006367111.1   PREDICTED: lipoxygenase homology domain-containing protein 1-like [Solanum tuberosum]
26,4962	26,668	26,4194	26,807	26,722	27,4175	27,021	27,652	26,791	27,2423	2,17	-0,602	ref   XP_006360053.1   PREDICTED: multiple organellar RNA editing factor 8, chloroplastic/mitochondrial-like [Solanum tuberosum]
27,6306	27,721	27,5365	27,529	28,1556	28,6356	27,987	28,39	28,0587	28,3431	2,056	-0,568	ref   XP_006362602.1   PREDICTED: cathepsin B-like [Solanum tuberosum]
29,5676	29,923	29,5474	29,84	29,5054	30,5316	29,935	30,5	30,0464	30,1937	2,312	-0,565	ref   XP_006341997.1   PREDICTED: cysteine proteinase 15A-like [Solanum tuberosum]

## Fortsetzung Tabelle E4: Auflistung der signifikant verschieden abundanten Proteine des Vergleichs TI gegen TK.

TI_13	TI_17	TI_21	TI_9	TI_A2	TK_10	TK_14	TK_18	TK_22	TK_A1	-Log Student's T-test p-value TI_TK	Student's T-test Difference TI_TK	Fasta headers
NaN	23,794	23,6403	23,741	23,8883	24,0951	NaN	24,646	24,1529	24,4269	2,194	-0,565	ref   XP_006362527.1   PREDICTED: aspartic proteinase nepenthesin-1 [Solanum tuberosum]
24,8811	25,375	24,7787	24,837	24,8919	25,5099	25,34	25,788	NaN	25,427	2,166	-0,563	ref   XP_006360795.1   PREDICTED: uncharacterized protein LOC102579696 [Solanum tuberosum]
28,7977	29,304	29,1905	29,222	29,2628	29,8998	29,628	29,772	29,4536	29,7981	2,772	-0,555	ref   XP_006342644.1   PREDICTED: low-temperature-induced cysteine proteinase-like [Solanum tuberosum]
28,4187	28,057	27,9658	27,58	28,1902	28,5211	28,539	28,854	28,3932	28,6384	2,062	-0,547	ref   XP_015168024.1   PREDICTED: pectinesterase-like isoform X2 [Solanum tuberosum];ref   XP_006355816.2   PREDICTED: pectinesterase-like isoform X1 [Solanum tuberosum]
27,5482	27,778	27,4178	27,658	27,9652	28,5173	28,03	28,297	27,9468	28,2573	2,327	-0,536	gb   ABA40443.1   beta-alanine synthase-like protein [Solanum tuberosum];ref   NP_001275125.1   N-carbamoylputrescine amidase [Solanum tuberosum]
23,9308	24,074	24,1727	24,117	NaN	25,0042	24,373	24,491	24,4259	24,7172	2,166	-0,529	ref   XP_015160002.1   PREDICTED: cinnamoyl-CoA reductase 1-like isoform X3 [Solanum tuberosum];ref   XP_006365624.1   PREDICTED: cinnamoyl-CoA reductase 1-like isoform X2 [Solanum tuberosum]

Fortsetzung Tabelle E4: Auflistung der signifikant verschieden abundanten Proteine des Vergleichs TI gegen TK.

TI_13	TI_17	TI_21	TI_9	TI_A2	TK_10	TK_14	TK_18	TK_22	TK_A1	-Log Student's T-test p-value TI_TK	Student's T-test Difference TI_TK	Fasta headers
27,2922	26,995	27,1149	27,1	27,1531	27,6571	27,804	27,991	27,2099	27,6103	2,275	-0,524	ref   NP_001275174.1   glucan endo-1,3-beta-glucosidase-like precursor [Solanum tuberosum];gb   AFU52649.1   beta-1,3-glucanase 14 [Solanum tuberosum]
27,2825	27,532	27,2659	27,424	26,9082	27,9606	27,782	28,033	27,6052	27,6381	2,31	-0,521	emb   CAB60277.1   UCP [Solanum tuberosum];ref   NP_001275146.1   uncharacterized protein LOC102585221 [Solanum tuberosum];emb   CAA72107.1   mitochondrial uncoupling protein [Solanum tuberosum]
27,225	27,105	26,9192	26,984	27,2385	27,8066	27,647	27,598	27,4168	27,5388	3,301	-0,507	ref   XP_006349738.1   PREDICTED: NADH dehydrogenase [ubiquinone] flavoprotein 2, mitochondrial [Solanum tuberosum]
28,3559	27,901	27,8703	28,035	27,8434	28,8437	28,498	28,351	28,2135	28,6263	2,092	-0,505	ref   XP_006359140.1   PREDICTED: V-type proton ATPase subunit D [Solanum tuberosum];gb   ABF00099.1   mitochondrial ATP synthesis coupled proton transport protein, partial [Solanum tuberosum]
26,3293	26,57	26,1721	26,383	26,6134	26,924	26,723	27,303	26,6492	26,9833	2,147	-0,503	ref   XP_006359642.1   PREDICTED: 5-methylthioadenosine/S-adenosylhomocysteine nucleosidase 2-like [Solanum tuberosum]
28,9896	28,842	28,9651	29,234	29,0457	29,5616	29,354	29,58	29,2499	29,7502	2,658	-0,484	ref   XP_006339239.1   PREDICTED: proteasome subunit alpha type-3-like [Solanum tuberosum]

Fortsetzung Tabelle E4: Auflistung der signifikant verschieden abundanten Proteine des Vergleichs TI gegen TK.

TI_13	TI_17	TI_21	TI_9	TI_A2	TK_10	TK_14	TK_18	TK_22	TK_A1	-Log Student's T-test p-value TI_TK	Student's T-test Difference TI_TK	Fasta headers
29,323	29,392	29,1764	29,68	29,137	30,027	29,651	29,852	29,6219	29,9708	2,288	-0,483	ref   XP_006345126.1   PREDICTED: ATP synthase subunit gamma, mitochondrial [Solanum tuberosum]
26,6185	26,943	26,7125	26,899	26,43	27,1586	27,112	27,469	27,0677	27,128	2,366	-0,466	ref   XP_006345104.1   PREDICTED: alpha-1,4-glucan-protein synthase [UDP-forming] 2-like [Solanum tuberosum]
27,5249	27,418	27,1047	27,376	27,1557	27,9749	27,774	27,928	27,6487	27,5849	2,54	-0,466	ref   XP_006361688.1   PREDICTED: serine carboxypeptidase-like [Solanum tuberosum]
29,5141	29,849	29,9184	29,912	29,6847	30,2677	29,94	30,446	30,1549	30,0839	2,084	-0,403	ref   XP_006352160.1   PREDICTED: aspartate aminotransferase, cytoplasmic [Solanum tuberosum]
29,5408	29,478	29,2714	29,307	29,071	29,7357	29,749	29,951	29,5627	29,5597	2,053	-0,378	gb   ABC69046.1   cinnamic acid 4-hydroxylase [Solanum tuberosum];ref   XP_006350887.1   PREDICTED: trans-cinnamate 4-monooxygenase [Solanum tuberosum]
24,2577	24,013	NaN	23,9	24,0657	24,5795	24,502	24,247	24,3063	24,5508	2,147	-0,378	ref   XP_006339931.1   PREDICTED: ras-related protein RABA2a-like [Solanum tuberosum]
27,1429	27,222	27,1193	27,322	26,9328	27,7034	27,309	27,588	27,3811	27,6139	2,263	-0,371	ref   XP_006365181.1   PREDICTED: putative hydrolase YtaP isoform X1 [Solanum tuberosum];ref   XP_006365182.1   PREDICTED: putative hydrolase YtaP isoform X2 [Solanum tuberosum]

Fortsetzung Tabelle E4: Auflistung der signifikant verschieden abundanten Proteine des Vergleichs TI gegen TK.

TI_13	TI_17	TI_21	TI_9	TI_A2	TK_10	TK_14	TK_18	TK_22	TK_A1	-Log Student's T-test p-value TI_TK	Student's T-test Difference TI_TK	Fasta headers
28,292	28,147	28,0512	28,082	27,9604	28,5922	28,435	28,471	28,2447	28,6405	2,513	-0,37	ref   XP_006351516.1   PREDICTED: gamma carbonic anhydrase-like 2, mitochondrial [Solanum tuberosum]
28,283	28,432	28,4702	28,594	28,2346	28,8467	28,756	28,79	28,5591	28,7477	2,499	-0,337	ref   XP_006345304.1   PREDICTED: 3-isopropylmalate dehydrogenase, chloroplastic-like [Solanum tuberosum];ref   NP_001305547.1   3-isopropylmalate dehydrogenase, chloroplastic [Solanum tuberosum]
28,3459	28,084	28,1356	27,92	27,9055	28,2797	28,413	28,515	28,4461	28,3637	2,172	-0,326	ref   XP_006354379.1   PREDICTED: probable xyloglucan endotransglucosylase/hydrolase protein 32 [Solanum tuberosum]
26	26,1	26,228	26,189	25,9124	26,2774	26,202	26,414	26,3514	26,3565	2,025	-0,234	ref   XP_006341913.1   PREDICTED: arabinosyltransferase RRA3-like [Solanum tuberosum]
26,5432	26,391	26,375	26,488	26,3355	26,6722	26,633	26,79	26,5304	26,5721	2,16	-0,213	ref   XP_006360294.1   PREDICTED: uncharacterized oxidoreductase At4g09670 [Solanum tuberosum]
28,8109	28,952	28,896	28,677	28,9	28,4096	28,585	28,402	28,6784	28,6754	2,287	0,2971	ref   XP_006345634.1   PREDICTED: importin subunit alpha-2-like [Solanum tuberosum]
NaN	24,949	24,9132	24,762	25,1071	NaN	24,423	NaN	24,6496	24,4889	2,023	0,4122	ref   XP_006340888.1   PREDICTED: putative G3BP-like protein [Solanum tuberosum]
30,1641	30,292	30,6059	30	30,3365	29,7454	29,836	29,987	29,968	29,779	2,238	0,4165	ref   XP_015161465.1   PREDICTED: eukaryotic translation initiation factor 3 subunit A-like [Solanum tuberosum]

Fortsetzung Tabelle E4: Auflistung der signifikant verschieden abundanten Proteine des Vergleichs TI gegen TK.

TI_13	TI_17	TI_21	TI_9	TI_A2	TK_10	TK_14	TK_18	TK_22	TK_A1	-Log Student's T-test p-value TI_TK	Student's T-test Difference TI_TK	Fasta headers
26,2399	26,6	26,7722	26,6	26,7555	25,8997	25,97	26,421	26,2692	25,9825	2,089	0,4852	ref   XP_006340625.1   PREDICTED: nucleolar protein 6 [Solanum tuberosum]
25,5219	25,638	25,4511	25,544	25,9449	24,6583	25,263	25,395	24,8984	24,9728	2,219	0,5825	ref   XP_006342377.1   PREDICTED: tubulin--tyrosine ligase-like protein 12 [Solanum tuberosum]
24,7851	24,937	24,9464	24,881	24,994	NaN	24,351	NaN	24,5589	24,0533	2,616	0,5878	ref   XP_006344260.1   PREDICTED: ARF guanine-nucleotide exchange factor GNOM-like [Solanum tuberosum]
26,1546	26,46	26,6308	26,13	26,4157	25,3962	25,942	NaN	25,8534	25,7708	2,336	0,6175	ref   XP_006350940.1   PREDICTED: ubiquitin carboxyl-terminal hydrolase 12-like isoform X4 [Solanum tuberosum]
26,8604	27,443	27,6743	27,307	27,4926	26,8215	26,741	26,483	26,9596	26,6678	2,356	0,621	ref   XP_006352139.1   PREDICTED: eukaryotic translation initiation factor 5B-like [Solanum tuberosum]
27,4675	27,677	27,7229	27,399	27,4421	26,3516	27,102	26,772	27,4154	26,9004	2,005	0,6335	ref   XP_006359549.1   PREDICTED: importin subunit beta-1-like [Solanum tuberosum]
NaN	25,259	NaN	25,534	NaN	24,5343	24,762	NaN	24,7312	24,6143	2,508	0,7358	ref   XP_006354354.1   PREDICTED: cell division cycle protein 48 homolog [Solanum tuberosum]
26,9167	NaN	NaN	26,673	26,7788	25,1197	NaN	NaN	NaN	25,4862	2,546	1,4866	ref   NP_001275608.1   pathogenesis-related protein P2-like precursor [Solanum tuberosum];gb   AFW90570.1   pathogenesis-related protein P2 [Solanum tuberosum];emb

## E 3.4 Zusammenfassung der signifikant verschieden abundanten Proteine des Vergleichs KI gegen TI

**Tabelle E5: Auflistung der signifikant verschieden abundanten Proteine des Vergleichs KI gegen TI.** Signifikanzniveau des Student's T-test  $-\log > 2$ , KI: 'Karolin' inokuliert, TI: 'Tomensa' inokuliert.

KI_11	KI_15	KI_19	KI_23	KI_A4	TI_13	TI_17	TI_21	TI_9	TI_A2	-Log Student's T-test p-value KI_TI	Student's T-test Difference KI_TI	Fasta headers
25,1	25,725	25,5674	25,36	25,6282	29,198	28,945	28,602	27,955	28,459	5,9646	-3,1563	ref   XP_015159415.1   PREDICTED: probable (S)-N-methylcoclaurine 3-hydroxylase isozyme 2 [Solanum tuberosum]
23,85	23,068	23,4211	23,887	NaN	25,36	26,45	26,427	26,616	NaN	3,5881	-2,6574	ref   XP_015160097.1   PREDICTED: protein ECERIFERUM 1-like [Solanum tuberosum];ref   XP_015160098.1   PREDICTED: protein ECERIFERUM 1-like [Solanum tuberosum]
23,7	23,615	24,0029	24,238	23,8943	25,112	27,267	26,589	24,576	27,176	2,4144	-2,2538	dbj   BAV14871.1   steroid C-26 oxygenase [Solanum tuberosum]
24,8	24,942	25,8917	25,985	25,8256	27,58	27,913	27,931	27,411	27,548	4,3484	-2,1867	ref   XP_015164735.1   PREDICTED: glutamate--glyoxylate aminotransferase 2-like [Solanum tuberosum]
28,19	27,026	28,0037	27,782	27,8276	29,504	30,299	30,197	29,804	29,805	4,6565	-2,1566	ref   XP_006349906.2   PREDICTED: apyrase-like [Solanum tuberosum];ref   XP_006349910.1   PREDICTED: apyrase-like isoform X2 [Solanum tuberosum];ref   XP_006349909.1   PREDICTED: apyrase-like isoform X1 [Solanum tuberosum]
26,27	26,94	26,5127	26,754	26,8142	27,824	27,999	27,787	27,916	28,207	4,7877	-1,2885	ref   XP_006367888.1   PREDICTED: primary amine oxidase-like [Solanum tuberosum];ref   XP_015159060.1   PREDICTED: LOW QUALITY PROTEIN: primary amine oxidase-like [Solanum tuberosum]

Tabelle E5: Auflistung der signifikant verschieden abundanten Proteine des Vergleichs KI gegen TI.

KI_11	KI_15	KI_19	KI_23	KI_A4	TI_13	TI_17	TI_21	TI_9	TI_A2	-Log Student's T-test p-value KI_TI	Student's T-test Difference KI_TI	Fasta headers
27,62	27,717	28,7896	28,143	27,6155	28,203	29,719	29,152	29,638	29,433	2,109	-1,2527	gb   AAA85122.1   polyphenol oxidase [Solanum tuberosum]
26,08	25,837	25,792	26,339	25,7385	26,15	27,724	27,246	27,111	27,735	2,3938	-1,236	ref   XP_006367388.1   PREDICTED: UPF0202 protein At1g10490-like [Solanum tuberosum]
26,08	26,407	26,6958	26,669	25,9762	27,613	27,518	27,631	27,446	26,917	3,1677	-1,0596	ref   XP_006362730.1   PREDICTED: molybdopterin biosynthesis protein CNX1 [Solanum tuberosum]
NaN	NaN	24,722	24,761	24,1473	25,385	25,917	25,395	25,439	NaN	2,1542	-0,9904	dbj   BAQ55275.1   sterol side chain reductase [Solanum tuberosum];emb   CBP07441.1   sterol reductase [Solanum tuberosum]
24,93	NaN	24,9779	24,43	24,4643	NaN	25,465	25,453	26,024	NaN	2,0071	-0,9476	ref   XP_006343613.1   PREDICTED: replication factor C subunit 1 isoform X2 [Solanum tuberosum];ref   XP_006343612.1   PREDICTED: replication factor C subunit 1 isoform X1 [Solanum tuberosum]
27,44	27,667	27,8905	27,853	27,6581	28,196	28,662	28,41	29,189	28,777	3,0027	-0,9452	ref   NP_001305567.1   phenylalanine ammonia-lyase-like [Solanum tuberosum];gb   AGT63063.1   phenylalanine ammonia-lyase [Solanum tuberosum]
26,77	26,564	26,6185	27,202	25,9808	27,467	27,677	27,723	27,399	27,442	2,6525	-0,9156	ref   XP_006359549.1   PREDICTED: importin subunit beta-1-like [Solanum tuberosum]
27,95	28,104	27,7603	27,593	27,9687	28,551	28,426	28,85	28,627	29,031	3,4138	-0,821	gb   ABB86242.1   phosphoglycerate kinase-like [Solanum tuberosum]
26,2	26,33	26,8767	26,658	26,3839	27,411	27,367	27,227	26,88	27,47	2,8924	-0,7802	ref   XP_006343054.1   PREDICTED: ruBisCO large subunit-binding protein subunit beta, chloroplastic [Solanum tuberosum]

Tabelle E5: Auflistung der signifikant verschieden abundanten Proteine des Vergleichs KI gegen TI.

KI_11	KI_15	KI_19	KI_23	KI_A4	TI_13	TI_17	TI_21	TI_9	TI_A2	-Log Student's T-test p-value KI_TI	Student's T-test Difference KI_TI	Fasta headers
26,58	26,591	25,6959	26,513	26,4674	26,811	27,406	27,446	26,834	27,237	2,1331	-0,7778	ref   XP_006351506.1   PREDICTED: DNA-directed RNA polymerases IV and V subunit 2-like [Solanum tuberosum]
26,13	25,985	26,1399	25,8	25,9741	26,36	26,958	26,931	26,659	27	3,3474	-0,7765	ref   XP_015158641.1   PREDICTED: protein arginine N-methyltransferase 1.1-like isoform X2 [Solanum tuberosum];ref   XP_006362769.1   PREDICTED: probable protein arginine N-methyltransferase 1 isoform X1 [Solanum tuberosum]
28,38	28,195	28,4373	28,44	27,912	28,722	29,073	29,439	28,93	29,036	2,9634	-0,7675	ref   XP_006358509.1   PREDICTED: glutamate--tRNA ligase, cytoplasmic [Solanum tuberosum]
26,91	25,91	26,5208	26,779	27,0487	27,183	27,408	27,541	27,274	27,537	2,1267	-0,7558	ref   XP_006353659.1   PREDICTED: muscle M-line assembly protein unc-89 [Solanum tuberosum]
26,71	27,141	26,8266	26,622	26,7842	27,309	27,579	27,595	27,908	27,444	3,3071	-0,7507	ref   XP_006365623.1   PREDICTED: cinnamoyl-CoA reductase 1-like isoform X1 [Solanum tuberosum];ref   XP_015160004.1   PREDICTED: cinnamoyl-CoA reductase 1-like isoform X2 [Solanum tuberosum]
26,84	26,152	26,548	26,801	26,7357	26,86	27,443	27,674	27,307	27,493	2,3905	-0,7407	ref   XP_006352139.1   PREDICTED: eukaryotic translation initiation factor 5B-like [Solanum tuberosum]
25,93	25,402	25,4999	25,021	25,1561	NaN	26,077	26,144	25,903	26,412	2,0772	-0,7318	ref   XP_006358008.1   PREDICTED: ribosome biogenesis protein BRX1 homolog [Solanum tuberosum]

Tabelle E5: Auflistung der signifikant verschieden abundanten Proteine des Vergleichs KI gegen TI.

KI_11	KI_15	KI_19	KI_23	KI_A4	TI_13	TI_17	TI_21	TI_9	TI_A2	-Log Student's T-test p-value KI_TI	Student's T-test Difference KI_TI	Fasta headers
24,48	24,914	24,4784	24,034	24,578	25,161	25,16	25,317	24,769	25,712	2,1011	-0,7276	ref   XP_006356802.1   PREDICTED: KH domain-containing protein At4g18375-like [Solanum tuberosum]
25,88	25,58	26,1143	26,098	25,6731	26,24	26,6	26,772	26,6	26,755	2,9828	-0,724	ref   XP_006340625.1   PREDICTED: nucleolar protein 6 [Solanum tuberosum]
21,01	NaN	21,3108	21,206	21,4662	NaN	22,103	22,293	21,609	21,88	2,2034	-0,724	ref   XP_006363188.1   PREDICTED: nucleolar complex protein 2 homolog [Solanum tuberosum]
26,75	26,733	26,2847	26,625	26,4516	27,134	27,378	27,285	27,072	27,586	3,318	-0,7213	ref   XP_006352586.1   PREDICTED: nuclear cap-binding protein subunit 1 [Solanum tuberosum];gb   AFN07652.1   cap-binding protein 80 [Solanum tuberosum];gb   ACN43589.1   nuclear cap-binding protein [Solanum tuberosum]
24,93	25,044	24,6822	25,143	24,5218	NaN	25,657	25,649	25,445	NaN	2,3615	-0,7189	ref   XP_006353524.1   PREDICTED: protein arginine N-methyltransferase 1.1-like [Solanum tuberosum]
26,3	26,118	26,2263	26,167	26,4386	26,855	27,275	26,692	26,878	27,097	3,5427	-0,7102	ref   XP_006353133.1   PREDICTED: brefeldin A-inhibited guanine nucleotide-exchange protein 5 [Solanum tuberosum]
27,45	26,961	27,3188	27,834	27,4872	28,283	28,251	28,337	27,645	28,077	2,2497	-0,7092	ref   XP_006366503.1   PREDICTED: clustered mitochondria protein [Solanum tuberosum];ref   XP_006366502.1   PREDICTED: clustered mitochondria protein [Solanum tuberosum]
25,48	25,719	25,6619	25,894	25,9327	26,333	26,473	26,286	26,62	26,409	3,8668	-0,6865	ref   XP_006348416.1   PREDICTED: uncharacterized protein LOC102589993 [Solanum tuberosum]

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KI_11	KI_15	KI_19	KI_23	KI_A4	TI_13	TI_17	TI_21	TI_9	TI_A2	-Log Student's T-test p-value KI_TI	Student's T-test Difference KI_TI	Fasta headers
24,21	24,28	24,5283	24,568	24,3561	24,582	24,86	25,047	25,445	25,318	2,3356	-0,6617	ref   XP_015164407.1   PREDICTED: multisubstrate pseudouridine synthase 7 isoform X2 [Solanum tuberosum];ref   XP_006347775.1   PREDICTED: multisubstrate pseudouridine synthase 7 isoform X1 [Solanum tuberosum]
25,31	25,658	25,0951	25,509	25,3446	25,991	25,913	26,423	25,823	25,992	2,7505	-0,6445	ref   XP_006349245.1   PREDICTED: basic 7S globulin-like [Solanum tuberosum]
25,6	24,795	25,3487	25,097	25,4082	25,783	25,669	26,022	26,058	NaN	2,0246	-0,6324	ref   XP_006343342.1   PREDICTED: serine/arginine-rich splicing factor SR45a-like [Solanum tuberosum];ref   XP_015160464.1   PREDICTED: LOW QUALITY PROTEIN: serine/arginine-rich splicing factor SR45a [Solanum tuberosum]
28,2	28,084	28,6608	28,578	28,3593	29,171	29,297	29,081	28,634	28,843	2,3417	-0,6294	ref   XP_006348634.1   PREDICTED: heat shock protein 90-5, chloroplastic [Solanum tuberosum]
26,19	26,151	26,096	26,175	26,2296	26,322	27,129	26,895	26,577	26,983	2,4928	-0,6132	ref   XP_006364823.1   PREDICTED: DNA replication licensing factor MCM6 [Solanum tuberosum]
25,89	25,483	26,0829	26,07	26,1308	NaN	26,436	26,342	26,597	26,773	2,1783	-0,6048	ref   XP_006362726.1   PREDICTED: serrate RNA effector molecule isoform X2 [Solanum tuberosum];ref   XP_006362725.1   PREDICTED: serrate RNA effector molecule isoform X1 [Solanum tuberosum]
25,83	25,878	26,4559	26,362	26,2556	26,563	26,901	26,703	26,661	26,971	2,4409	-0,6034	ref   XP_006345845.1   PREDICTED: protein BTR1-like isoform X2 [Solanum tuberosum]

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25,61	25,605	25,4602	25,797	25,9067	26,505	26,222	26,229	25,942	26,441	2,8011	-0,5916	ref   XP_006341820.1   PREDICTED: lon protease homolog 1, mitochondrial-like [Solanum tuberosum]
NaN	23,94	23,6591	23,903	23,9356	24,319	24,175	24,48	24,483	24,787	2,5717	-0,5896	ref   XP_015169564.1   PREDICTED: uncharacterized protein LOC102598092 [Solanum tuberosum]
24,34	NaN	24,2313	NaN	24,3962	24,785	24,937	24,946	24,881	24,994	4,2171	-0,5875	ref   XP_006344260.1   PREDICTED: ARF guanine-nucleotide exchange factor GNOM-like [Solanum tuberosum];ref   XP_006344259.1   PREDICTED: ARF guanine-nucleotide exchange factor GNOM-like [Solanum tuberosum];ref   XP_015164826.1   PREDICTED: ARF guanine-n
26,82	26,293	26,7974	26,729	27,156	27,283	27,281	27,09	27,357	27,72	2,0334	-0,5874	ref   XP_006359861.1   PREDICTED: endoglucanase 17 [Solanum tuberosum]
28,48	27,992	28,1996	28,15	28,2639	28,497	29,167	29,119	28,479	28,739	2,0782	-0,5831	ref   XP_006356990.1   PREDICTED: ABC transporter C family member 14-like [Solanum tuberosum]
25,76	25,894	25,9316	26,07	25,7799	26,294	26,485	26,645	26,011	26,898	2,1564	-0,5796	ref   XP_006352809.1   PREDICTED: cullin-1-like [Solanum tuberosum]
29,61	29,931	29,3389	29,424	29,5284	30,087	30,033	30,329	30,241	30,028	2,9004	-0,5763	ref   XP_006359033.1   PREDICTED: dynamin-related protein 4C-like isoform X1 [Solanum tuberosum]
28,22	28,183	28,6617	28,668	28,2845	29	29,171	29,062	28,681	28,966	2,5431	-0,573	ref   XP_006363008.1   PREDICTED: heat shock protein 90-6, mitochondrial [Solanum tuberosum]

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KI_11	KI_15	KI_19	KI_23	KI_A4	TI_13	TI_17	TI_21	TI_9	TI_A2	-Log Student's T-test p-value KI_TI	Student's T-test Difference KI_TI	Fasta headers
25,36	25,334	25,1938	25,263	25,2889	NaN	25,942	25,741	25,445	26,293	2,0237	-0,5665	ref   XP_006348429.1   PREDICTED: methionine aminopeptidase 2B-like [Solanum tuberosum];ref   XP_006348428.1   PREDICTED: methionine aminopeptidase 2B-like [Solanum tuberosum]
27,57	26,909	27,7075	27,581	27,5072	27,882	27,923	28,201	27,934	28,135	2,1806	-0,5605	ref   XP_006363509.1   PREDICTED: 60S ribosomal protein L8-like [Solanum tuberosum]
24,82	24,846	25,1284	24,679	NaN	25,239	NaN	25,516	25,231	25,695	2,0235	-0,5523	ref   XP_006344900.1   PREDICTED: DNA-directed RNA polymerases I and III subunit RPAC1 [Solanum tuberosum]
25,36	25,363	25,7627	25,639	25,4615	25,844	26,34	26,405	25,994	25,734	2,1037	-0,545	ref   XP_006362492.1   PREDICTED: regulator of nonsense transcripts 1 homolog [Solanum tuberosum]
26,71	26,575	26,0832	26,643	26,4894	26,802	27,032	27,117	26,993	27,276	2,4112	-0,5429	ref   XP_006347043.1   PREDICTED: DNA-directed RNA polymerase II subunit RPB2 [Solanum tuberosum]
29,88	29,738	29,6847	29,808	29,5762	30,164	30,292	30,606	30	30,337	2,8636	-0,542	ref   XP_015161465.1   PREDICTED: eukaryotic translation initiation factor 3 subunit A-like [Solanum tuberosum]
27,11	27,044	27,1801	27,017	26,9773	27,673	27,547	27,628	27,526	27,668	5,5163	-0,5417	ref   XP_015168140.1   PREDICTED: acylamino-acid-releasing enzyme isoform X3 [Solanum tuberosum];ref   XP_015168139.1   PREDICTED: acylamino-acid-releasing enzyme isoform X2 [Solanum tuberosum];ref   XP_006356048.1   PREDICTED: acylamino-acid-releasing

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KI_11	KI_15	KI_19	KI_23	KI_A4	TI_13	TI_17	TI_21	TI_9	TI_A2	-Log Student's T-test p-value KI_TI	Student's T-test Difference KI_TI	Fasta headers
27,17	27,019	27,3386	27,139	27,6591	27,94	27,759	27,643	27,875	27,809	2,6568	-0,5407	ref   XP_006349370.1   PREDICTED: UDP-glucose:glycoprotein glucosyltransferase isoform X1 [Solanum tuberosum];ref   XP_006349371.1   PREDICTED: UDP-glucose:glycoprotein glucosyltransferase isoform X2 [Solanum tuberosum]
25,61	25,567	25,6549	25,5	25,525	26,024	25,874	26,356	26,247	26,039	3,4633	-0,537	ref   XP_015165946.1   PREDICTED: protein QUIRKY-like [Solanum tuberosum];ref   XP_006351338.1   PREDICTED: protein QUIRKY-like [Solanum tuberosum]
25,38	25,516	25,4135	25,248	25,3787	26,252	25,847	26,023	25,736	25,763	3,0301	-0,536	ref   XP_006363751.1   PREDICTED: VHS domain-containing protein At3g16270 [Solanum tuberosum]
24,91	25,035	25,0555	24,88	24,912	25,001	25,902	25,578	25,34	25,62	2,0376	-0,5301	ref   XP_006345311.1   PREDICTED: protease 2 [Solanum tuberosum]
NaN	NaN	24,3705	24,612	24,2441	NaN	24,949	24,913	24,762	25,107	2,0924	-0,5238	ref   XP_006340888.1   PREDICTED: putative G3BP-like protein [Solanum tuberosum]
25,58	25,291	25,8171	25,726	26,0047	26,021	26,308	26,294	26,067	26,346	2,282	-0,5226	ref   XP_006339555.1   PREDICTED: protein pleiotropic regulatory locus 1-like [Solanum tuberosum]
31,46	31,286	30,7326	30,999	31,211	31,667	31,636	31,851	31,54	31,585	2,2882	-0,5184	ref   XP_006362741.1   PREDICTED: protein argonaute 4 [Solanum tuberosum]
27,58	27,545	27,4475	27,733	27,5166	27,964	28,038	28,275	28,17	27,963	3,8001	-0,5171	ref   XP_006345885.1   PREDICTED: ubiquitin carboxyl-terminal hydrolase 12-like [Solanum tuberosum]

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KI_11	KI_15	KI_19	KI_23	KI_A4	TI_13	TI_17	TI_21	TI_9	TI_A2	-Log Student's T-test p-value KI_TI	Student's T-test Difference KI_TI	Fasta headers
24,37	24,45	NaN	NaN	24,4426	25,095	24,762	25,066	24,806	NaN	2,3482	-0,5097	ref   XP_015167802.1   PREDICTED: ABC transporter D family member 1 [Solanum tuberosum];ref   XP_006355352.1   PREDICTED: ABC transporter D family member 1 [Solanum tuberosum]
28,74	28,46	28,1943	28,31	28,7435	29,051	28,934	29,249	28,992	28,761	2,2382	-0,5086	ref   XP_015164242.1   PREDICTED: protein argonaute 4 [Solanum tuberosum];ref   XP_006347269.1   PREDICTED: protein argonaute 4 [Solanum tuberosum];ref   XP_006347268.1   PREDICTED: protein argonaute 4 [Solanum tuberosum]
28,22	28,14	27,9065	28,142	28,082	28,412	28,674	28,812	28,413	28,716	3,0969	-0,5078	ref   XP_006361388.1   PREDICTED: splicing factor 3B subunit 3-like [Solanum tuberosum]
25,23	25,077	25,0662	25,129	25,1824	25,522	25,638	25,451	25,544	25,945	3,1119	-0,483	ref   XP_006342377.1   PREDICTED: tubulin--tyrosine ligase-like protein 12 [Solanum tuberosum]
24,61	24,312	24,6899	24,45	24,3726	NaN	25,004	24,972	24,724	25,175	2,3829	-0,4813	ref   XP_006367267.1   PREDICTED: zinc finger CCCH domain-containing protein 11 [Solanum tuberosum];gb   ABA81871.1   unknown [Solanum tuberosum]
26,23	26,458	26,2209	26,183	26,2417	26,544	26,499	26,991	26,682	27,015	2,4097	-0,4802	ref   XP_015159310.1   PREDICTED: topless-related protein 4 isoform X2 [Solanum tuberosum];ref   XP_006364222.1   PREDICTED: topless-related protein 4 isoform X1 [Solanum tuberosum]

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KI_11	KI_15	KI_19	KI_23	KI_A4	TI_13	TI_17	TI_21	TI_9	TI_A2	-Log Student's T-test p-value KI_TI	Student's T-test Difference KI_TI	Fasta headers
27,18	27,204	27,4215	27,56	27,0619	27,844	27,746	27,979	27,459	27,796	2,3194	-0,4794	ref   XP_006343806.1   PREDICTED: ABC transporter F family member 3 [Solanum tuberosum]
26,37	26,406	26,5747	26,088	26,1877	26,781	26,643	26,869	26,613	27,061	2,3794	-0,4675	ref   XP_006349631.1   PREDICTED: uncharacterized protein LOC102598172 [Solanum tuberosum]
26,5	26,415	26,3993	26,836	26,1312	26,827	26,99	27,083	26,783	26,934	2,2316	-0,4673	ref   XP_006357016.1   PREDICTED: protein arginine N-methyltransferase 1.5 isoform X2 [Solanum tuberosum];ref   XP_006357015.1   PREDICTED: protein arginine N-methyltransferase 1.5 isoform X1 [Solanum tuberosum]
29,03	28,726	29,2127	29,048	29,0444	29,348	29,542	29,629	29,316	29,501	2,7661	-0,4555	ref   XP_006362686.1   PREDICTED: subtilisin-like protease SBT1.7 [Solanum tuberosum]
26,62	26,255	26,7878	26,749	26,7427	26,843	27,189	27,379	26,989	27,023	2,0138	-0,4539	ref   XP_006351113.1   PREDICTED: RNA-binding protein 39 [Solanum tuberosum]
26,34	26,544	26,3631	26,356	26,0429	27,022	26,735	26,981	26,652	26,514	2,1473	-0,4522	ref   XP_006338128.1   PREDICTED: uncharacterized protein LOC102602976 isoform X2 [Solanum tuberosum];ref   XP_006338127.1   PREDICTED: uncharacterized protein LOC102602976 isoform X1 [Solanum tuberosum]
25,88	25,898	25,8689	26,119	25,7865	26,155	26,46	26,631	26,13	26,416	2,4363	-0,4468	ref   XP_006350940.1   PREDICTED: ubiquitin carboxyl-terminal hydrolase 12-like isoform X4 [Solanum tuberosum];ref   XP_006350939.1   PREDICTED: ubiquitin carboxyl-terminal hydrolase 12-like isoform X3 [Solanum tuberosum]

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26,48	26,36	26,1703	26,631	26,142	26,751	26,859	26,907	26,791	26,682	2,6342	-0,4414	ref   XP_006348895.1   PREDICTED: probable alpha,alpha-trehalose-phosphate synthase [UDP-forming] 7 [Solanum tuberosum];emb   CDI44188.1   unnamed protein product [Solanum tuberosum]
29,33	29,157	28,9175	29,176	29,2055	29,734	29,441	29,805	29,501	29,489	2,6507	-0,4376	ref   XP_006356463.1   PREDICTED: clathrin heavy chain 1-like [Solanum tuberosum]
28,24	28,222	28,2496	28,36	28,0753	28,428	28,691	28,467	28,653	29,053	2,141	-0,4288	ref   XP_006347401.1   PREDICTED: glyceraldehyde-3-phosphate dehydrogenase, cytosolic [Solanum tuberosum]
28,04	28,024	28,0805	28,129	27,7974	28,325	28,439	28,598	28,475	28,347	3,3088	-0,4236	ref   XP_006344143.1   PREDICTED: glutamine--tRNA ligase [Solanum tuberosum]
27,65	27,842	27,5574	27,705	27,4675	28,293	27,837	28,2	28,033	27,964	2,4432	-0,4216	ref   XP_015168568.1   PREDICTED: coatomer subunit alpha-1-like [Solanum tuberosum]
28,34	27,951	28,176	28,256	28,3145	28,431	28,753	28,741	28,406	28,794	2,2816	-0,4179	ref   XP_006342811.1   PREDICTED: eukaryotic translation initiation factor 2 subunit gamma-like [Solanum tuberosum]
26,73	26,475	26,5691	26,661	26,4741	27,062	26,891	27,258	26,724	27,058	2,4142	-0,416	ref   XP_015162871.1   PREDICTED: cell division cycle protein 48 homolog [Solanum tuberosum];ref   XP_006344438.1   PREDICTED: cell division cycle protein 48 homolog [Solanum tuberosum]
28,04	28,25	27,7622	27,992	27,86	28,372	28,252	28,406	28,496	28,448	2,6817	-0,4146	ref   XP_006360493.1   PREDICTED: pyruvate kinase 1, cytosolic-like [Solanum tuberosum]

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29,84	30,12	30,0674	30,177	29,7204	30,632	30,435	30,501	30,214	30,208	2,0497	-0,4129	ref   XP_006343964.1   PREDICTED: puromycin-sensitive aminopeptidase isoform X3 [Solanum tuberosum];ref   XP_006343963.1   PREDICTED: puromycin-sensitive aminopeptidase isoform X3 [Solanum tuberosum];ref   XP_006343962.1   PREDICTED: puromycin-sensitive
28,38	27,936	28,2325	28,314	28,3066	28,329	28,74	28,74	28,609	28,809	2,119	-0,4108	ref   XP_006366960.1   PREDICTED: ABC transporter E family member 2 [Solanum tuberosum];ref   XP_006366958.1   PREDICTED: ABC transporter E family member 2 [Solanum tuberosum];ref   XP_006359955.1   PREDICTED: ABC transporter E family member 2 [Solanum
26	26,103	26,123	26,141	26,0888	26,736	26,658	26,398	26,264	26,446	2,7276	-0,4093	ref   XP_006341452.1   PREDICTED: staphylococcal nuclease domain-containing protein 1-like [Solanum tuberosum];ref   XP_006341451.1   PREDICTED: staphylococcal nuclease domain-containing protein 1-like [Solanum tuberosum]
28,76	28,665	28,685	28,916	28,6043	29,181	29,113	29,389	29,035	28,942	2,6365	-0,4065	ref   XP_006352368.1   PREDICTED: isoleucine--tRNA ligase, cytoplasmic isoform X1 [Solanum tuberosum];ref   XP_006352369.1   PREDICTED: isoleucine--tRNA ligase, cytoplasmic isoform X2 [Solanum tuberosum]
29,38	29,503	29,2289	29,436	29,3153	29,881	29,706	29,958	29,451	29,802	2,3232	-0,386	ref   XP_006367425.1   PREDICTED: leucine--tRNA ligase, cytoplasmic-like [Solanum tuberosum]

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29,79	29,815	30,0415	30,043	29,7018	30,188	30,325	30,356	30,133	30,305	2,8036	-0,3834	ref   XP_006354613.1   PREDICTED: eukaryotic translation initiation factor 3 subunit B [Solanum tuberosum]
27,06	26,659	26,812	26,592	26,7945	26,928	27,256	27,354	27,17	27,089	2,0834	-0,3766	ref   XP_015165240.1   PREDICTED: eukaryotic translation initiation factor 2 subunit gamma-like [Solanum tuberosum];ref   XP_006349820.1   PREDICTED: eukaryotic translation initiation factor 2 subunit gamma-like [Solanum tuberosum]
27,86	27,52	27,6767	27,672	27,8375	27,814	28,209	28,062	28,137	28,214	2,3358	-0,3743	ref   XP_015158912.1   PREDICTED: KH domain-containing protein At4g18375-like [Solanum tuberosum]
27,23	27,178	27,1029	27,018	26,9024	27,556	27,296	27,447	27,351	27,634	2,5986	-0,3705	ref   XP_006342963.1   PREDICTED: glycolpeptide N-tetradecanoyltransferase 1-like [Solanum tuberosum]
32,45	32,183	32,2236	32,201	32,0148	32,36	32,793	32,571	32,671	32,521	2,1929	-0,3683	ref   XP_006365404.1   PREDICTED: guanine nucleotide-binding protein subunit beta-like protein [Solanum tuberosum]
33,63	33,795	33,6568	33,745	33,4667	34,114	33,992	34,163	33,825	34,039	2,7156	-0,3681	ref   XP_006351589.1   PREDICTED: elongation factor 2 [Solanum tuberosum];ref   XP_006351588.1   PREDICTED: elongation factor 2 [Solanum tuberosum];ref   XP_006368069.1   PREDICTED: elongation factor 2-like, partial [Solanum tuberosum]

Tabelle E5: Auflistung der signifikant verschieden abundanten Proteine des Vergleichs KI gegen TI.

KI_11	KI_15	KI_19	KI_23	KI_A4	TI_13	TI_17	TI_21	TI_9	TI_A2	-Log Student's T-test p-value KI_TI	Student's T-test Difference KI_TI	Fasta headers
25,54	25,652	25,4465	25,214	25,4481	25,931	25,699	25,899	25,782	NaN	2,2264	-0,3676	sp   Q43847.3   SSY2_SOLTU RecName: Full=Granule-bound starch synthase 2, chloroplastic/amyloplastic;AltName: Full=Granule-bound starch synthase II;Short=GBSS-II;Short=SS II;Flags: Precursor
23,62	NaN	23,669	23,852	23,617	NaN	24,136	24,109	23,908	NaN	2,0175	-0,3606	ref   XP_006360660.1   PREDICTED: protein RRP45A-like [Solanum tuberosum]
25,72	25,427	25,5689	25,415	25,6181	25,719	26,124	25,96	25,787	25,961	2,3437	-0,3602	ref   XP_006363451.1   PREDICTED: peptidyl-prolyl cis-trans isomerase FKBP62-like isoform X2 [Solanum tuberosum];ref   XP_015158937.1   PREDICTED: peptidyl-prolyl cis-trans isomerase FKBP62-like isoform X1 [Solanum tuberosum]
23,98	24,102	23,8874	24,106	23,8493	24,418	24,202	24,413	NaN	NaN	2,1935	-0,3595	ref   XP_006357074.1   PREDICTED: conserved oligomeric Golgi complex subunit 2 [Solanum tuberosum]
28,97	29,062	28,7734	29,078	28,9575	29,35	29,391	29,429	29,02	29,447	2,2549	-0,3592	ref   XP_006365761.2   PREDICTED: carbamoyl-phosphate synthase large chain, chloroplastic, partial [Solanum tuberosum]
34,83	34,622	34,8525	34,882	34,6885	34,982	35,124	35,07	35,184	35,101	3,1047	-0,3175	gb   ABB86283.1   elongation factor-1 alpha-like [Solanum tuberosum];emb   CBC15012.1   unnamed protein product [Solanum tuberosum];emb   CBC00300.1   unnamed protein product [Solanum tuberosum]

Tabelle E5: Auflistung der signifikant verschieden abundanten Proteine des Vergleichs KI gegen TI.

KI_11	KI_15	KI_19	KI_23	KI_A4	TI_13	TI_17	TI_21	TI_9	TI_A2	-Log Student's T-test p-value KI_TI	Student's T-test Difference KI_TI	Fasta headers
26,99	26,978	27,1007	26,971	27,1341	27,428	27,328	27,26	27,374	27,341	3,9868	-0,3114	ref   XP_006348936.1   PREDICTED: serine/threonine-protein phosphatase 5 isoform X2 [Solanum tuberosum];ref   XP_006348935.1   PREDICTED: serine/threonine-protein phosphatase 5 isoform X1 [Solanum tuberosum]
27,68	27,774	27,8559	27,683	27,6275	28,133	27,838	27,985	28,196	27,999	2,4703	-0,3068	ref   XP_006353465.1   PREDICTED: peroxisomal fatty acid beta-oxidation multifunctional protein AIM1 [Solanum tuberosum]
27,99	28,003	27,9703	27,953	27,9673	28,419	28,193	28,483	28,018	28,297	2,1895	-0,3044	ref   XP_015165529.1   PREDICTED: ubiquitin carboxyl-terminal hydrolase 12 isoform X2 [Solanum tuberosum];ref   XP_006339190.1   PREDICTED: ubiquitin carboxyl-terminal hydrolase 12 isoform X1 [Solanum tuberosum]
30,82	30,777	30,8768	30,941	30,7659	31,004	31,214	31,001	31,067	31,404	2,157	-0,3009	ref   XP_006354121.1   PREDICTED: isocitrate dehydrogenase [NADP] [Solanum tuberosum]
29,12	29,382	29,3191	29,455	29,1408	29,605	29,458	29,496	29,626	29,72	2,1939	-0,2983	ref   XP_006356234.1   PREDICTED: proline--tRNA ligase, cytoplasmic-like [Solanum tuberosum];ref   XP_006356233.1   PREDICTED: proline--tRNA ligase, cytoplasmic-like [Solanum tuberosum]
28,78	28,685	28,7461	28,797	28,6329	29,05	28,942	29,178	28,869	29,081	2,8586	-0,2965	emb   CAB96077.1   alpha-glucosidase [Solanum tuberosum];ref   NP_001275392.1   protein MAL2 [Solanum tuberosum]

Tabelle E5: Auflistung der signifikant verschieden abundanten Proteine des Vergleichs KI gegen TI.

KI_11	KI_15	KI_19	KI_23	KI_A4	TI_13	TI_17	TI_21	TI_9	TI_A2	-Log Student's T-test p-value KI_TI	Student's T-test Difference KI_TI	Fasta headers
28,82	28,692	28,9774	29,028	28,9702	29,025	29,281	29,233	29,272	29,14	2,2356	-0,2924	ref   XP_006360605.1   PREDICTED: DEAD-box ATP-dependent RNA helicase 37-like [Solanum tuberosum];ref   XP_006360604.1   PREDICTED: DEAD-box ATP-dependent RNA helicase 37-like [Solanum tuberosum]
24,4	24,615	24,6285	24,532	NaN	24,715	24,887	24,851	24,821	NaN	2,2739	-0,2752	ref   XP_006357251.1   PREDICTED: probable AMP deaminase [Solanum tuberosum];ref   XP_006357250.1   PREDICTED: probable AMP deaminase [Solanum tuberosum]
29,8	29,747	29,8274	30,023	29,8792	29,913	30,259	30,152	30,129	30,176	2,1843	-0,2713	ref   XP_006347917.1   PREDICTED: T-complex protein 1 subunit alpha [Solanum tuberosum]
28,73	28,726	28,8917	28,99	29,0091	29,081	29,283	29,069	29,186	29,078	2,1918	-0,2697	ref   XP_006351268.1   PREDICTED: inosine-5-monophosphate dehydrogenase 2-like [Solanum tuberosum]
27,97	28,106	28,1049	28,016	28,04	28,359	28,201	28,32	28,253	28,406	3,3706	-0,2614	ref   NP_001275405.1   neutral alpha-glucosidase AB-like precursor [Solanum tuberosum];emb   CAA04707.1   alpha-glucosidase (plasmid) [Solanum tuberosum]
26,71	26,829	26,996	26,964	26,83	27,023	27,065	27,023	27,152	27,118	2,1757	-0,211	ref   XP_006365507.1   PREDICTED: tyrosine--tRNA ligase 1, cytoplasmic [Solanum tuberosum]
29,27	29,354	29,4864	29,359	29,321	29,488	29,65	29,595	29,607	29,482	2,5294	-0,2054	ref   XP_006351366.1   PREDICTED: asparagine--tRNA ligase, cytoplasmic 1-like [Solanum tuberosum]

Tabelle E5: Auflistung der signifikant verschieden abundanten Proteine des Vergleichs KI gegen TI.

KI_11	KI_15	KI_19	KI_23	KI_A4	TI_13	TI_17	TI_21	TI_9	TI_A2	-Log Student's T-test p-value KI_TI	Student's T-test Difference KI_TI	Fasta headers
28,15	28,147	28,1843	28,118	28,3725	28,139	27,962	27,879	27,948	27,818	2,07	0,2453	ref   NP_001305619.1   hexokinase-1 [Solanum tuberosum];emb   CDI44493.1   unnamed protein product [Solanum tuberosum];emb   CDH48157.1   unnamed protein product [Solanum tuberosum]
27,86	27,932	27,8943	27,769	27,9568	27,698	27,519	27,413	27,75	27,727	2,1261	0,262	ref   XP_015167545.1   PREDICTED: proline iminopeptidase isoform X1 [Solanum tuberosum];ref   XP_015167547.1   PREDICTED: proline iminopeptidase isoform X2 [Solanum tuberosum]
28,87	28,899	28,9109	28,702	28,9453	28,685	28,627	28,532	28,413	28,72	2,3089	0,2698	ref   XP_006339720.1   PREDICTED: protein ASPARTIC PROTEASE IN GUARD CELL 2-like [Solanum tuberosum]
30,45	30,574	30,6521	30,466	30,6045	30,418	30,24	30,3	30,397	30,016	2,0033	0,2759	ref   NP_001275168.1   mitochondrial-processing peptidase subunit alpha [Solanum tuberosum]
29,35	29,553	29,5839	29,392	29,5364	29,419	29,207	29,233	29,06	29,058	2,1162	0,2879	ref   XP_015160264.1   PREDICTED: dihydrolipoyllysine-residue acetyltransferase component 2 of pyruvate dehydrogenase complex, mitochondrial-like isoform X2 [Solanum tuberosum]
28,89	28,885	29,2458	28,851	28,9851	28,646	28,776	28,615	28,691	28,589	2,3429	0,3085	ref   XP_006344750.1   PREDICTED: dihydrolipoyl dehydrogenase 2, chloroplastic-like [Solanum tuberosum]

Tabelle E5: Auflistung der signifikant verschieden abundanten Proteine des Vergleichs KI gegen TI.

KI_11	KI_15	KI_19	KI_23	KI_A4	TI_13	TI_17	TI_21	TI_9	TI_A2	-Log Student's T-test p-value KI_TI	Student's T-test Difference KI_TI	Fasta headers
30,06	30,304	29,9675	30,008	30,2085	30,042	29,719	29,713	29,782	29,712	2,1084	0,3163	gb   ABC01911.1   succinyl CoA ligase beta subunit-like protein [Solanum tuberosum];ref   XP_006352733.1   PREDICTED: succinyl-CoA ligase [ADP-forming] subunit beta, mitochondrial [Solanum tuberosum]
28,17	28,469	28,2348	28,235	28,3844	28,022	27,937	27,948	27,946	28,056	3,1146	0,317	ref   XP_006362653.1   PREDICTED: protein SGT1 homolog [Solanum tuberosum]
28,77	29,079	28,8859	28,798	28,9557	28,67	28,468	28,637	28,565	28,498	2,8728	0,3295	ref   NP_001275223.1   glucose-6-phosphate isomerase [Solanum tuberosum];gb   AAU00726.1   glucose-6-phosphate isomerase [Solanum tuberosum]
27,45	27,41	27,6153	27,372	27,6353	27,215	27,364	27,098	27,063	26,973	2,4628	0,3545	ref   XP_006339893.1   PREDICTED: uncharacterized protein LOC102591281 [Solanum tuberosum]
27,16	27,137	26,9538	27,067	27,1652	26,637	26,768	26,769	26,566	26,946	2,8122	0,3586	ref   XP_006347068.1   PREDICTED: clathrin light chain 1-like [Solanum tuberosum]
29,61	29,687	29,9366	29,708	29,9686	29,347	29,574	29,277	29,541	29,37	2,3394	0,3594	ref   XP_006364593.1   PREDICTED: malate dehydrogenase, chloroplastic [Solanum tuberosum]
27,74	27,74	28,0946	27,689	27,9756	27,511	27,614	27,245	27,645	27,426	2,001	0,3596	ref   NP_001305532.1   probable voltage-gated potassium channel subunit beta [Solanum tuberosum];emb   CAA04451.1   putative beta-subunit of K+ channels [Solanum tuberosum]
28,58	28,787	28,8821	28,652	28,8175	28,343	28,388	28,271	28,536	28,378	3,0266	0,3602	ref   XP_006362230.1   PREDICTED: enoyl-[acyl-carrier-protein] reductase [NADH] 2, chloroplastic-like [Solanum tuberosum]

Tabelle E5: Auflistung der signifikant verschieden abundanten Proteine des Vergleichs KI gegen TI.

KI_11	KI_15	KI_19	KI_23	KI_A4	TI_13	TI_17	TI_21	TI_9	TI_A2	-Log Student's T-test p-value KI_TI	Student's T-test Difference KI_TI	Fasta headers
27,93	27,949	28,1551	27,967	28,12	27,754	27,475	27,877	27,813	27,4	2,0248	0,3602	ref   XP_006343823.1   PREDICTED: 26S proteasome non-ATPase regulatory subunit 8 homolog A [Solanum tuberosum]
24,84	24,744	24,7732	24,77	24,9879	24,251	24,446	24,534	24,566	NaN	2,6426	0,3733	ref   NP_001275406.1   mitogen-activated protein kinase kinase [Solanum tuberosum];dbj   BAC81698.1   mitogen-activated protein kinase kinase [Solanum tuberosum]
28,62	28,677	28,9193	28,658	28,9307	28,453	28,609	28,366	28,352	28,135	2,2218	0,3786	ref   XP_006341958.1   PREDICTED: gamma carbonic anhydrase 2, mitochondrial-like [Solanum tuberosum]
28,4	28,658	28,4593	28,527	28,1628	28,244	28,068	27,906	28,046	28,05	2,3252	0,379	ref   XP_006366482.1   PREDICTED: bifunctional aspartate aminotransferase and glutamate/aspartate-prephenate aminotransferase [Solanum tuberosum]
24,47	24,383	24,4636	24,273	24,6574	24,258	24,013	NaN	23,9	24,066	2,2946	0,3895	ref   XP_006339931.1   PREDICTED: ras-related protein RABA2a-like [Solanum tuberosum]
28,78	28,803	28,8505	28,515	29,0304	28,283	28,432	28,47	28,594	28,235	2,2334	0,3923	ref   XP_006345304.1   PREDICTED: 3-isopropylmalate dehydrogenase, chloroplastic-like [Solanum tuberosum];ref   NP_001305547.1   3-isopropylmalate dehydrogenase, chloroplastic [Solanum tuberosum]
26,55	26,787	26,698	26,604	26,7069	26,239	26,564	26,143	26,037	26,344	2,4429	0,404	ref   XP_006347624.1   PREDICTED: 3-oxoacyl-[acyl-carrier-protein] synthase 3 A, chloroplastic-like [Solanum tuberosum]

Tabelle E5: Auflistung der signifikant verschieden abundanten Proteine des Vergleichs KI gegen TI.

KI_11	KI_15	KI_19	KI_23	KI_A4	TI_13	TI_17	TI_21	TI_9	TI_A2	-Log Student's T-test p-value KI_TI	Student's T-test Difference KI_TI	Fasta headers
28,42	28,712	28,6083	28,567	28,8354	28,19	28,152	27,944	28,476	28,322	2,2002	0,4127	ref   NP_001275255.1   peroxiredoxin-2B-like [Solanum tuberosum];gb   ADD60395.1   thioredoxin peroxidase 1 [Solanum tuberosum]
26,64	26,829	26,7454	26,376	26,6148	26,117	26,321	26,095	26,37	26,239	2,6398	0,4132	gb   AAC21565.1   lactate dehydrogenase-2a, partial [Solanum tuberosum]
29,23	29,027	29,0922	28,831	29,4487	28,803	28,577	28,761	28,821	28,588	2,1461	0,4162	ref   XP_006359022.1   PREDICTED: probable ATP synthase 24 kDa subunit, mitochondrial [Solanum tuberosum]
29,47	29,568	29,7832	29,63	29,9031	29,236	29,293	29,071	29,105	29,558	2,1513	0,4178	ref   NP_001275026.1   alpha-1,4-glucan-protein synthase [UDP-forming] 1 [Solanum tuberosum];gb   AFX67042.1   alpha-1,4-glucan-protein synthase [Solanum tuberosum]
29,63	29,697	30,0359	29,79	29,79	29,471	29,519	29,085	29,421	29,343	2,4596	0,421	gb   ABB02620.1   disulfide-isomerase precursor-like protein [Solanum tuberosum];ref   NP_001275470.1   protein disulfide-isomerase like 2-1-like precursor [Solanum tuberosum]
29,47	29,623	29,6644	29,32	29,8398	28,798	29,304	29,19	29,222	29,263	2,0069	0,428	ref   XP_006342644.1   PREDICTED: low-temperature-induced cysteine proteinase-like [Solanum tuberosum]
27,64	27,491	27,7163	27,644	27,9467	27,244	27,118	27,271	27,281	27,355	3,0677	0,4336	gb   ABA81853.1   NADH:ubiquinone oxidoreductase-like [Solanum tuberosum];emb   CAA59062.1   NADH dehydrogenase [Solanum tuberosum]
26,88	27,074	27,3477	27,153	27,4387	26,758	26,739	26,535	26,646	27,003	2,1126	0,4432	ref   XP_006348452.1   PREDICTED: malonyl CoA-acyl carrier protein transacylase [Solanum tuberosum]

Tabelle E5: Auflistung der signifikant verschieden abundanten Proteine des Vergleichs KI gegen TI.

KI_11	KI_15	KI_19	KI_23	KI_A4	TI_13	TI_17	TI_21	TI_9	TI_A2	-Log Student's T-test p-value KI_TI	Student's T-test Difference KI_TI	Fasta headers
28,13	28,21	28,2874	28,085	28,3024	28,043	27,748	27,644	27,86	27,493	2,6027	0,4455	ref   XP_006365951.1   PREDICTED: dihydrolipoyllysine-residue succinyltransferase component of 2-oxoglutarate dehydrogenase complex 1, mitochondrial-like [Solanum tuberosum]
27,07	27,249	27,3009	27,083	27,1666	26,618	26,943	26,713	26,899	26,43	2,61	0,4532	ref   XP_006345104.1   PREDICTED: alpha-1,4-glucan-protein synthase [UDP-forming] 2-like [Solanum tuberosum]
29,22	29,525	29,6362	29,382	29,6419	28,99	28,842	28,965	29,234	29,046	2,7257	0,4664	ref   XP_006339239.1   PREDICTED: proteasome subunit alpha type-3-like [Solanum tuberosum]
26,09	26,451	26,1661	25,792	25,9034	25,722	25,626	25,72	25,662	25,301	2,0462	0,4739	ref   XP_006361872.1   PREDICTED: branched-chain-amino-acid aminotransferase-like protein 1 [Solanum tuberosum]
NaN	25,354	25,0849	25,087	25,0879	24,685	24,563	24,672	24,785	NaN	2,9832	0,4773	ref   XP_006359349.1   PREDICTED: chorismate synthase 2, chloroplastic isoform X2 [Solanum tuberosum];ref   XP_006359348.1   PREDICTED: chorismate synthase 2, chloroplastic isoform X1 [Solanum tuberosum]
25,37	25,202	25,3393	25,315	25,5747	25,115	24,985	24,606	24,752	24,933	2,6735	0,4821	ref   XP_006344389.1   PREDICTED: aldose 1-epimerase [Solanum tuberosum]
31,91	31,853	31,9234	31,921	32,0556	31,485	31,357	31,343	31,451	31,614	4,4211	0,4834	gb   ABA81861.1   UDP-glucose:protein transglucosylase-like [Solanum tuberosum];ref   NP_001275274.1   alpha-1,4-glucan-protein synthase [UDP-forming] 2 [Solanum tuberosum]

Tabelle E5: Auflistung der signifikant verschieden abundanten Proteine des Vergleichs KI gegen TI.

KI_11	KI_15	KI_19	KI_23	KI_A4	TI_13	TI_17	TI_21	TI_9	TI_A2	-Log Student's T-test p-value KI_TI	Student's T-test Difference KI_TI	Fasta headers
30,2	30,175	30,4036	30,356	30,2314	29,514	29,849	29,918	29,912	29,685	3,2531	0,497	ref   XP_006352160.1   PREDICTED: aspartate aminotransferase, cytoplasmic [Solanum tuberosum]
25,6	25,488	25,8439	25,422	26,0386	25,26	25,303	25,092	25,354	24,87	2,0723	0,5029	ref   XP_006361888.1   PREDICTED: tryptophan synthase alpha chain-like [Solanum tuberosum]
27,04	27,244	27,3803	27,299	27,4397	26,498	26,903	26,843	26,755	26,844	3,0546	0,5117	ref   XP_006351937.1   PREDICTED: 3-hydroxyisobutyryl-CoA hydrolase-like protein 3, mitochondrial [Solanum tuberosum]
28,05	27,771	27,5519	27,585	27,9703	26,841	27,25	27,526	27,324	27,393	2,0262	0,5183	ref   XP_006342181.1   PREDICTED: cinnamoyl-CoA reductase 2 [Solanum tuberosum]
24,29	24,889	24,4333	24,58	24,7872	23,931	24,074	24,173	24,117	NaN	2,2344	0,5215	ref   XP_015160002.1   PREDICTED: cinnamoyl-CoA reductase 1-like isoform X3 [Solanum tuberosum];ref   XP_006365624.1   PREDICTED: cinnamoyl-CoA reductase 1-like isoform X2 [Solanum tuberosum]
30,51	30,952	30,7748	30,719	30,7818	30,531	30,322	30,013	30,178	30,038	2,6619	0,5307	gb   ABB02640.1   unknown [Solanum tuberosum];ref   NP_001274808.1   uncharacterized protein LOC102577677 [Solanum tuberosum]
27,14	27,372	26,9273	27,396	26,9748	26,785	26,203	26,703	26,804	26,645	2,1802	0,5343	ref   NP_001275082.1   eukaryotic translation initiation factor 5A-1/2 [Solanum tuberosum]
29,67	30,214	29,9724	29,621	29,9321	29,481	29,158	29,279	29,367	29,412	2,665	0,542	ref   XP_006359009.1   PREDICTED: uncharacterized oxidoreductase At4g09670 [Solanum tuberosum]

Tabelle E5: Auflistung der signifikant verschieden abundanten Proteine des Vergleichs KI gegen TI.

KI_11	KI_15	KI_19	KI_23	KI_A4	TI_13	TI_17	TI_21	TI_9	TI_A2	-Log Student's T-test p-value KI_TI	Student's T-test Difference KI_TI	Fasta headers
27,53	27,651	27,803	27,732	28,0661	27,428	27,147	27,13	27,363	26,901	2,5997	0,5622	ref   XP_015163431.1   PREDICTED: phosphomannomutase [Solanum tuberosum];ref   XP_006345602.1   PREDICTED: phosphomannomutase [Solanum tuberosum]
27,58	27,496	27,6438	27,333	27,663	26,498	27,166	26,984	27,207	26,906	2,5334	0,5907	ref   XP_006350996.1   PREDICTED: acetylglutamate kinase, chloroplastic [Solanum tuberosum];ref   XP_006350995.1   PREDICTED: acetylglutamate kinase, chloroplastic [Solanum tuberosum]
30,69	30,169	31,088	30,832	30,6096	30,057	30,052	30,093	30,383	29,84	2,0284	0,5923	ref   XP_006344041.2   PREDICTED: protein disulfide-isomerase-like [Solanum tuberosum]
26,98	26,862	26,9317	26,578	27,2768	26,338	26,235	26,005	26,654	26,329	2,4054	0,6133	ref   XP_006340128.1   PREDICTED: lactoylglutathione lyase isoform X2 [Solanum tuberosum];ref   XP_006340127.1   PREDICTED: lactoylglutathione lyase isoform X1 [Solanum tuberosum]
26,01	26,126	26,7478	26,13	26,122	25,792	25,606	25,356	25,706	NaN	2,0537	0,6133	ref   XP_006343784.1   PREDICTED: methionine gamma-lyase-like [Solanum tuberosum]
26,74	26,802	26,901	26,445	26,9363	26,183	26,023	26,151	25,885	26,512	2,7065	0,6143	ref   XP_006338468.1   PREDICTED: aldose 1-epimerase-like [Solanum tuberosum]
28,51	28,632	28,6139	28,469	28,9372	28,356	27,901	27,87	28,035	27,843	3,0054	0,6321	ref   XP_006359140.1   PREDICTED: V-type proton ATPase subunit D [Solanum tuberosum];gb   ABF00099.1   mitochondrial ATP synthesis coupled proton transport protein, partial [Solanum tuberosum]

Tabelle E5: Auflistung der signifikant verschieden abundanten Proteine des Vergleichs KI gegen TI.

KI_11	KI_15	KI_19	KI_23	KI_A4	TI_13	TI_17	TI_21	TI_9	TI_A2	-Log Student's T-test p-value KI_TI	Student's T-test Difference KI_TI	Fasta headers
28,73	28,828	29,3029	28,824	29,4007	28,535	28,211	28,267	28,574	28,331	2,4329	0,6335	ref   NP_001305530.1   peptidyl-prolyl cis-trans isomerase CYP19-4 precursor [Solanum tuberosum];gb   ABB86261.1   cyclophilin ROC7-like [Solanum tuberosum]
27,55	27,663	27,8877	27,615	28,0377	27,225	27,105	26,919	26,984	27,238	3,4416	0,6567	ref   XP_006349738.1   PREDICTED: NADH dehydrogenase [ubiquinone] flavoprotein 2, mitochondrial [Solanum tuberosum]
26,08	26,461	26,3807	26,187	26,4426	25,664	25,838	25,735	25,348	NaN	2,9214	0,6634	ref   XP_006363024.1   PREDICTED: SEC12-like protein 2 [Solanum tuberosum]
27,7	28,135	28,0391	27,951	27,9252	27,283	27,532	27,266	27,424	26,908	3,0854	0,6669	emb   CAB60277.1   UCP [Solanum tuberosum];ref   NP_001275146.1   uncharacterized protein LOC102585221 [Solanum tuberosum];emb   CAA72107.1   mitochondrial uncoupling protein [Solanum tuberosum]
25,7	25,68	25,3959	25,623	26,0738	24,94	25,317	25	24,816	NaN	2,4747	0,6755	ref   XP_006366021.2   PREDICTED: bifunctional epoxide hydrolase 2-like [Solanum tuberosum]
29	29,285	29,3498	29,274	29,5255	28,722	28,369	28,46	28,899	28,532	3,2072	0,691	ref   XP_006345251.1   PREDICTED: 20 kDa chaperonin, chloroplastic-like [Solanum tuberosum]
24,65	24,732	24,3001	24,53	24,1333	23,847	NaN	23,538	23,933	NaN	2,1728	0,6958	ref   NP_001275088.1   cathepsin B-like cysteine proteinase precursor [Solanum tuberosum];gb   AAR25800.1   cathepsin B-like cysteine proteinase [Solanum tuberosum]
29,05	29,296	29,3749	29,135	29,3655	28,957	28,387	28,603	28,681	28,078	2,6138	0,7021	emb   CAA05999.1   hypothetical protein [Solanum tuberosum]

Tabelle E5: Auflistung der signifikant verschieden abundanten Proteine des Vergleichs KI gegen TI.

KI_11	KI_15	KI_19	KI_23	KI_A4	TI_13	TI_17	TI_21	TI_9	TI_A2	-Log Student's T-test p-value KI_TI	Student's T-test Difference KI_TI	Fasta headers
26,12	25,953	26,4237	26,631	26,1043	26,063	25,43	25,107	25,583	25,518	2,1452	0,7065	ref   XP_006361994.1   PREDICTED: uncharacterized protein LOC102604916 [Solanum tuberosum]
26,39	26,96	26,3733	26,398	26,5588	26,384	25,826	25,731	25,365	25,834	2,1476	0,7081	ref   XP_006351522.1   PREDICTED: alpha-galactosidase-like [Solanum tuberosum]
32,83	33,007	32,2352	32,253	32,756	32,216	31,795	31,912	31,814	31,802	2,4127	0,7091	dbj   BAA00407.1   alpha-glucon phosphorylase precursor [Solanum tuberosum]
28,73	28,623	28,6031	28,584	28,5858	27,575	27,729	27,933	28,15	28,183	3,43	0,712	sp   Q9FS29.1   CAS2_SOLTU RecName: Full=Bifunctional L-3-cyanoalanine synthase/cysteine synthase 2, mitochondrial;Flags: Precursor
25,46	25,582	25,6479	25,203	25,3902	25,025	24,15	24,915	24,87	NaN	2,0916	0,7173	ref   XP_006352374.1   PREDICTED: mitochondrial pyruvate carrier 4 [Solanum tuberosum]
27,41	27,691	27,7342	27,015	27,5137	26,789	26,83	26,54	26,906	26,715	2,991	0,7177	ref   XP_006347071.1   PREDICTED: bifunctional epoxide hydrolase 2-like [Solanum tuberosum]
25,55	25,898	25,0747	25,211	25,284	24,879	24,821	24,657	24,384	NaN	2,1405	0,7182	ref   XP_015163662.1   PREDICTED: uncharacterized protein LOC102592665 [Solanum tuberosum];ref   XP_015163661.1   PREDICTED: uncharacterized protein LOC102592665 [Solanum tuberosum]
28,12	28,418	28,6743	28,233	28,5695	27,548	27,778	27,418	27,658	27,965	3,1174	0,7303	gb   ABA40443.1   beta-alanine synthase-like protein [Solanum tuberosum];ref   NP_001275125.1   N-carbamoylputrescine amidase [Solanum tuberosum]

Tabelle E5: Auflistung der signifikant verschieden abundanten Proteine des Vergleichs KI gegen TI.

KI_11	KI_15	KI_19	KI_23	KI_A4	TI_13	TI_17	TI_21	TI_9	TI_A2	-Log Student's T-test p-value KI_TI	Student's T-test Difference KI_TI	Fasta headers
30,99	31,311	31,4872	31,302	31,299	30,572	30,584	30,39	30,497	30,661	4,3534	0,737	gb   ABB72823.1   adenosine kinase isoform 1T-like protein [Solanum tuberosum];ref   NP_001274824.1   adenosine kinase isoform 1T-like protein [Solanum tuberosum]
27,61	27,83	28,2868	27,701	28,1366	27,33	27,426	26,922	26,743	27,439	2,3054	0,7401	ref   XP_006367111.1   PREDICTED: lipoxygenase homology domain-containing protein 1-like [Solanum tuberosum]
27,24	27,507	27,3992	27,224	27,487	26,813	26,691	26,42	26,596	26,618	4,535	0,7437	ref   XP_006363887.1   PREDICTED: aldehyde dehydrogenase family 3 member H1 [Solanum tuberosum]
26,28	26,866	25,9529	26,114	26,1836	25,665	25,378	25,497	25,377	25,728	2,6146	0,7496	ref   XP_006341098.1   PREDICTED: uncharacterized protein LOC102599218 [Solanum tuberosum]
28,74	29,23	28,7851	28,467	28,7452	28,419	28,057	27,966	27,58	28,19	2,4387	0,7516	ref   XP_015168024.1   PREDICTED: pectinesterase-like isoform X2 [Solanum tuberosum];ref   XP_006355816.2   PREDICTED: pectinesterase-like isoform X1 [Solanum tuberosum]
26,86	26,856	26,422	26,831	27,1043	26,075	26,032	25,832	26,236	26,111	3,4451	0,7571	ref   XP_006346815.1   PREDICTED: aspartic proteinase Asp1-like [Solanum tuberosum]
27,61	27,81	27,5225	27,649	27,7955	27,25	26,86	26,915	26,6	26,969	3,7013	0,7596	ref   XP_006348189.1   PREDICTED: protein DJ-1 homolog D [Solanum tuberosum]
25	24,936	24,8541	25,045	24,615	24,018	24,011	24,509	24,187	23,922	3,4452	0,7603	ref   XP_006346856.1   PREDICTED: transmembrane protein 33 homolog [Solanum tuberosum]

Tabelle E5: Auflistung der signifikant verschieden abundanten Proteine des Vergleichs KI gegen TI.

KI_11	KI_15	KI_19	KI_23	KI_A4	TI_13	TI_17	TI_21	TI_9	TI_A2	-Log Student's T-test p-value KI_TI	Student's T-test Difference KI_TI	Fasta headers
27,99	28,111	28,4726	28,397	28,0821	27,638	27,759	27,559	27,2	27,07	2,8232	0,7661	ref   XP_006364639.1   PREDICTED: uncharacterized protein LOC102586576 [Solanum tuberosum]
29,05	29,489	29,276	29,227	29,3158	29,134	28,623	28,379	28,214	28,159	2,4215	0,7697	ref   XP_006348885.1   PREDICTED: aspartate aminotransferase, mitochondrial [Solanum tuberosum]
29,79	29,688	29,8307	29,188	30,1757	28,877	28,858	29,101	29,211	28,771	2,5815	0,7714	ref   XP_006359648.1   PREDICTED: triosephosphate isomerase, chloroplastic [Solanum tuberosum]
32,8	32,94	32,2959	32,591	32,901	32,219	31,568	31,476	31,896	32,427	2,1649	0,7878	gb   AAA85121.1   polyphenol oxidase [Solanum tuberosum]
25,72	25,749	25,982	25,734	25,8479	24,962	NaN	25,066	NaN	NaN	3,5718	0,7924	ref   XP_006339367.1   PREDICTED: uncharacterized protein LOC102579678 [Solanum tuberosum]
28,74	28,846	28,5818	28,784	28,4048	28,263	27,778	27,544	27,925	NaN	2,7866	0,7947	gb   ABB43241.1   cytochrome c oxidase subunit II (mitochondrion) [Solanum tuberosum]
27,72	27,585	27,8084	27,795	27,7479	27,373	27,186	26,191	27,151	26,767	2,2351	0,7972	ref   XP_006363888.1   PREDICTED: probable L-ascorbate peroxidase 6, chloroplastic [Solanum tuberosum]
26,85	26,332	26,7631	26,731	27,0303	25,958	25,781	25,722	26,307	NaN	2,6003	0,7988	ref   XP_006338167.1   PREDICTED: NADH-cytochrome b5 reductase-like protein [Solanum tuberosum]
26,48	26,962	26,9957	26,82	26,98	26,078	25,593	25,802	26,119	26,639	2,3953	0,8018	ref   XP_006355431.1   PREDICTED: GEM-like protein 5 [Solanum tuberosum]
27,14	26,71	27,1929	26,805	27,0881	26,101	26,226	25,771	26,486	26,293	3,1415	0,8119	ref   XP_006339054.1   PREDICTED: glutathione S-transferase L3-like [Solanum tuberosum]

Tabelle E5: Auflistung der signifikant verschieden abundanten Proteine des Vergleichs KI gegen TI.

KI_11	KI_15	KI_19	KI_23	KI_A4	TI_13	TI_17	TI_21	TI_9	TI_A2	-Log Student's T-test p-value KI_TI	Student's T-test Difference KI_TI	Fasta headers
27,64	27,967	27,997	27,613	28,1984	26,914	26,812	26,651	27,481	27,489	2,354	0,8135	ref   XP_006347608.1   PREDICTED: cysteine proteinase inhibitor 6-like isoform X1 [Solanum tuberosum];gb   ABA40456.1   cystatin-like protein [Solanum tuberosum];ref   NP_001275067.1   cysteine proteinase inhibitor 6-like precursor [Solanum tuberosum]
25,84	25,757	25,6959	25,541	26,0787	24,954	24,588	24,857	25,451	NaN	2,485	0,8203	ref   XP_006364970.1   PREDICTED: ubiquitin-fold modifier-conjugating enzyme 1 [Solanum tuberosum]
29,05	28,826	29,3923	29	29,2983	28,42	27,536	28,281	28,829	28,347	2,1281	0,8303	gb   ABB86271.1   adenine phosphoribosyltransferase-like [Solanum tuberosum]
29,9	29,389	29,9854	29,69	30,1783	29,244	29,141	28,717	28,969	28,838	3,0344	0,8459	ref   XP_006354791.1   PREDICTED: probable aldehyde dehydrogenase [Solanum tuberosum]
26,42	27,183	26,4689	26,752	27,0509	26,483	25,639	25,418	25,822	26,189	2,1229	0,8655	ref   XP_006345530.1   PREDICTED: uncharacterized protein LOC102593878 [Solanum tuberosum]
28,71	28,672	29,2143	28,809	29,3243	28,183	27,376	28,179	28,487	28,177	2,2619	0,8658	gb   ABB29944.1   GTPase-like [Solanum tuberosum];ref   NP_001275076.1   GTP-binding protein SAR2-like [Solanum tuberosum];gb   ABB16973.1   GTPase-like protein [Solanum tuberosum];ref   NP_001275166.1   GTPase-like protein [Solanum tuberosum]

Tabelle E5: Auflistung der signifikant verschieden abundanten Proteine des Vergleichs KI gegen TI.

KI_11	KI_15	KI_19	KI_23	KI_A4	TI_13	TI_17	TI_21	TI_9	TI_A2	-Log Student's T-test p-value KI_TI	Student's T-test Difference KI_TI	Fasta headers
26,73	26,565	26,8925	26,055	26,6544	25,65	25,293	25,632	26,229	NaN	2,1421	0,8784	ref   XP_006341059.1   PREDICTED: arginine biosynthesis bifunctional protein ArgJ, chloroplastic isoform X2 [Solanum tuberosum]
25,97	25,876	26,1817	25,599	26,0744	24,898	NaN	24,468	25,392	25,45	2,1909	0,8883	ref   XP_006365040.1   PREDICTED: glycine cleavage system H protein 2, mitochondrial [Solanum tuberosum]
32,85	32,837	32,656	32,461	33,0136	32,424	31,7	31,903	31,798	31,498	2,9516	0,8985	emb   CAB92956.1   annexin p34 [Solanum tuberosum];gb   ABB02651.1   annexin p34-like [Solanum tuberosum]
28,97	29,557	28,896	28,751	28,7408	28,346	28,084	28,136	27,92	27,906	3,1431	0,9046	ref   XP_006354379.1   PREDICTED: probable xyloglucan endotransglucosylase/hydrolase protein 32 [Solanum tuberosum]
26,8	27,269	27,2501	26,582	27,1338	26,396	26,08	26,253	26,074	25,695	3,0021	0,9064	ref   XP_006346760.1   PREDICTED: glutamine synthetase cytosolic isozyme 1-1 [Solanum tuberosum];gb   AAG40238.2   AF302115_1 glutamine synthetase GS1 [Solanum tuberosum]
28,42	28,009	28,4137	28,066	28,7495	27,31	26,663	27,487	27,957	27,52	2,2693	0,9435	gb   AIT42262.1   RNase E inhibitor [Solanum tuberosum];gb   AIT42261.1   RNase E inhibitor [Solanum tuberosum];gb   AIT42260.1   RNase E inhibitor [Solanum tuberosum];gb   AIT42259.1   RNase E inhibitor [Solanum tuberosum]
25,3	NaN	25,2784	24,671	24,9478	24,006	23,992	23,911	24,418	NaN	2,6742	0,9666	ref   XP_006355490.1   PREDICTED: acid beta-fructofuranosidase [Solanum tuberosum]

Tabelle E5: Auflistung der signifikant verschieden abundanten Proteine des Vergleichs KI gegen TI.

KI_11	KI_15	KI_19	KI_23	KI_A4	TI_13	TI_17	TI_21	TI_9	TI_A2	-Log Student's T-test p-value KI_TI	Student's T-test Difference KI_TI	Fasta headers
24,83	25,662	25,9317	24,812	25,5155	24,448	24,182	24,323	24,251	24,579	2,5208	0,9939	ref   XP_015170961.1   PREDICTED: L-ascorbate peroxidase 2, cytosolic isoform X2 [Solanum tuberosum];ref   XP_006361766.2   PREDICTED: L-ascorbate peroxidase, cytosolic isoform X1 [Solanum tuberosum]
27,91	27,507	27,9867	27,599	28,4639	27,145	26,133	26,8	27,493	26,895	2,1281	0,9995	ref   XP_006358755.1   PREDICTED: superoxide dismutase [Mn], mitochondrial [Solanum tuberosum]
26,29	27,478	26,1907	26,414	26,7207	26,098	25,366	25,157	25,666	25,717	2,1526	1,0173	ref   XP_006348687.1   PREDICTED: probable inactive purple acid phosphatase 1 [Solanum tuberosum]
28,08	27,801	27,7146	27,168	28,116	NaN	26,749	26,516	26,977	NaN	2,2274	1,028	gb   AFX66999.1   putative acid phosphatase [Solanum tuberosum]
28,4	27,986	28,1262	28,296	28,6098	26,651	26,879	27,585	27,282	27,88	2,482	1,0286	ref   XP_006349246.1   PREDICTED: basic 7S globulin-like [Solanum tuberosum]
32,71	32,986	32,8072	32,936	32,6539	31,917	31,588	31,686	32,152	31,57	4,3964	1,0366	ref   NP_001274827.1   formate dehydrogenase, mitochondrial precursor [Solanum tuberosum]
27,42	27,379	27,2783	27,11	27,5052	26,539	26,263	26,231	26,384	25,97	4,7878	1,0614	ref   XP_006363582.1   PREDICTED: probable aldo-keto reductase 2 isoform X1 [Solanum tuberosum];ref   XP_006363583.1   PREDICTED: probable aldo-keto reductase 2 isoform X2 [Solanum tuberosum]
27,1	27,32	27,4472	27,245	27,6101	26,437	25,681	26,246	26,754	NaN	2,7075	1,064	ref   XP_006365336.1   PREDICTED: ATP synthase subunit delta, mitochondrial [Solanum tuberosum]
27,91	27,673	27,911	28,056	27,8961	26,211	26,822	26,78	27,544	26,728	2,8933	1,0727	ref   XP_006359049.1   PREDICTED: peroxidase 12-like [Solanum tuberosum]

Tabelle E5: Auflistung der signifikant verschieden abundanten Proteine des Vergleichs KI gegen TI.

KI_11	KI_15	KI_19	KI_23	KI_A4	TI_13	TI_17	TI_21	TI_9	TI_A2	-Log Student's T-test p-value KI_TI	Student's T-test Difference KI_TI	Fasta headers
28,41	27,363	28,4599	27,935	28,5512	26,545	27,337	27,297	27,123	27,005	2,4613	1,0817	ref   XP_006363162.1   PREDICTED: apyrase-like [Solanum tuberosum];ref   XP_006363161.1   PREDICTED: apyrase-like [Solanum tuberosum]
30,79	30,813	30,535	30,749	30,4542	29,564	29,395	29,249	29,637	30,062	3,9375	1,0858	ref   XP_015159896.1   PREDICTED: polyphenol oxidase D, chloroplastic isoform X1 [Solanum tuberosum]
27,45	27,622	27,6551	27,262	27,6664	26,383	26,335	26,362	26,761	26,373	5	1,089	ref   XP_006363372.1   PREDICTED: 12S seed storage globulin 1-like [Solanum tuberosum]
27,49	27,074	27,8827	27,558	27,8813	26,266	25,807	26,681	27,037	26,608	2,572	1,0972	ref   XP_006350958.1   PREDICTED: peptidyl-prolyl cis-trans isomerase CYP19-3-like [Solanum tuberosum]
26,04	26,514	26,668	26,161	26,5894	25,571	25,405	24,993	25,095	NaN	3,3261	1,1279	ref   XP_006348794.1   PREDICTED: cytosolic sulfotransferase 12-like [Solanum tuberosum]
26,32	26,607	26,7534	26,537	26,2133	NaN	25,198	25,319	25,552	NaN	3,5363	1,1297	ref   XP_015160680.1   PREDICTED: aquaporin PIP2-1-like [Solanum tuberosum];ref   XP_006367008.1   PREDICTED: aquaporin PIP2-1-like isoform X2 [Solanum tuberosum];ref   XP_006367007.1   PREDICTED: aquaporin PIP2-1-like isoform X1 [Solanum tuberosum]
26,45	27,309	26,6595	26,411	26,9275	26,015	25,63	25,778	24,941	NaN	2,3817	1,1594	ref   XP_006346969.1   PREDICTED: UPF0261 protein BPP1817 [Solanum tuberosum]
26,79	27,111	27,5322	26,849	27,3512	26,03	25,658	25,756	25,812	26,396	3,5794	1,197	ref   XP_006339635.1   PREDICTED: desiccation protectant protein Lea14 homolog [Solanum tuberosum]

Tabelle E5: Auflistung der signifikant verschieden abundanten Proteine des Vergleichs KI gegen TI.

KI_11	KI_15	KI_19	KI_23	KI_A4	TI_13	TI_17	TI_21	TI_9	TI_A2	-Log Student's T-test p-value KI_TI	Student's T-test Difference KI_TI	Fasta headers
27,15	26,881	26,7871	26,884	26,3821	25,694	NaN	25,462	25,83	25,447	3,8389	1,208	emb   CAB58263.1   pathogenesis related protein PR-1 [Solanum tuberosum];ref   NP_001275095.1   pathogenesis-related protein 1b precursor [Solanum tuberosum];ref   XP_006345695.1   PREDICTED: pathogenesis-related leaf protein 4 [Solanum tuberosum]
28,02	27,96	27,5638	28,225	28,2233	26,917	NaN	NaN	26,673	26,779	3,4201	1,2098	ref   NP_001275608.1   pathogenesis-related protein P2-like precursor [Solanum tuberosum];gb   AFW90570.1   pathogenesis-related protein P2 [Solanum tuberosum];emb   CAC51360.1   unnamed protein product, partial [Solanum tuberosum]
27,01	27,072	27,5646	27,434	27,5467	26,266	26,131	25,461	26,192	26,504	3,3745	1,2147	ref   XP_006361979.1   PREDICTED: soluble inorganic pyrophosphatase 6, chloroplastic-like [Solanum tuberosum]
28,59	28,465	28,7187	28,521	28,7728	26,885	27,745	27,43	27,344	27,443	4,4602	1,2438	ref   NP_001275417.1   epoxide hydrolase [Solanum tuberosum];gb   AAA81892.1   epoxide hydrolase [Solanum tuberosum]
30,57	30,523	29,864	29,674	30,7478	30,22	28,53	28,684	28,756	28,811	2,0324	1,2765	ref   XP_006356924.1   PREDICTED: peroxidase 3-like [Solanum tuberosum]
30,31	30,292	29,5021	30,164	30,5404	29,058	27,893	29,157	29,575	28,704	2,3185	1,2848	gb   AAA17408.1   chitinase, partial [Solanum tuberosum];sp   P52404.1   CHI2_SOLTU RecName: Full=Endochitinase 2;Flags: Precursor
29,02	28,657	29,5336	28,71	29,0921	26,943	28,204	27,953	27,375	27,992	2,792	1,3094	ref   XP_006348413.1   PREDICTED: probable 2-oxoglutarate-dependent dioxygenase AOP1.2 [Solanum tuberosum]

Tabelle E5: Auflistung der signifikant verschieden abundanten Proteine des Vergleichs KI gegen TI.

KI_11	KI_15	KI_19	KI_23	KI_A4	TI_13	TI_17	TI_21	TI_9	TI_A2	-Log Student's T-test p-value KI_TI	Student's T-test Difference KI_TI	Fasta headers
32,02	32,173	32,0364	31,675	31,7775	31,237	30,954	30,684	30,148	30,087	3,2083	1,3149	ref   XP_006362453.1   PREDICTED: probable inactive purple acid phosphatase 27 [Solanum tuberosum]
28,15	28,26	28,3818	27,974	28,5823	27,035	26,934	26,67	26,705	27,385	4,3623	1,3242	ref   XP_015162255.1   PREDICTED: acid phosphatase 1-like [Solanum tuberosum]
28,12	28,152	28,7824	28,212	28,3067	26,766	26,911	26,975	27,262	NaN	4,0714	1,3358	gb   ABA40463.1   elongation factor-like protein [Solanum tuberosum]
29,43	29,118	28,1487	29,249	29,6972	27,861	26,946	27,714	28,614	27,67	2,1899	1,3672	gb   AAA17410.1   chitinase;poly[1,4-beta-(2-acetamido-2-deoxy-D-glucoside)]glucanohydrolase, partial [Solanum tuberosum];sp   P52406.1   CHI4_SOLTU RecName: Full=Endochitinase 4;Flags: Precursor
25,72	25,709	26,2213	26,163	26,0793	25,02	24,594	24,377	24,627	24,16	4,3024	1,4221	ref   NP_001305472.1   phosphoglycerate kinase, chloroplastic [Solanum tuberosum];gb   AAC26785.1   phosphoglycerate kinase precursor [Solanum tuberosum];emb   CBN64586.1   unnamed protein product [Solanum tuberosum]
27,15	26,369	27,2538	27,514	26,8538	26,553	25,227	25,57	24,892	25,313	2,6506	1,5163	ref   NP_001275237.1   sucrose synthase [Solanum tuberosum];gb   AAO67719.1   sucrose synthase [Solanum tuberosum]
26,96	27,452	26,7647	27,729	27,8439	25,173	NaN	26,456	25,758	NaN	2,1369	1,5545	ref   XP_006347083.2   PREDICTED: polyphenol oxidase, chloroplastic-like [Solanum tuberosum]
31,55	32,088	31,6498	31,424	31,5479	30,882	30,02	29,829	30,032	29,622	3,7104	1,5748	ref   XP_006356134.1   PREDICTED: acid phosphatase 1-like [Solanum tuberosum]

Tabelle E5: Auflistung der signifikant verschieden abundanten Proteine des Vergleichs KI gegen TI.

KI_11	KI_15	KI_19	KI_23	KI_A4	TI_13	TI_17	TI_21	TI_9	TI_A2	-Log Student's T-test p-value KI_TI	Student's T-test Difference KI_TI	Fasta headers
27,82	28,304	26,8539	26,777	27,7006	26,695	25,789	25,949	25,93	25,18	2,4992	1,5829	emb   CAA70038.1   1,4-alpha-glucan branching enzyme, partial [Solanum tuberosum];ref   NP_001275183.1   1,4-alpha-glucan-branching enzyme [Solanum tuberosum];emb   CAA49463.1   1,4-alpha-glucan branching enzyme [Solanum tuberosum];sp   P30924.2   GLGB_
27,16	27,799	26,7965	26,941	26,8627	26,118	25,48	25,453	25,143	25,231	3,7297	1,6259	ref   XP_006358620.1   PREDICTED: poly(U)-specific endoribonuclease-B [Solanum tuberosum]
28,46	28,857	28,8813	28,875	28,3646	27,641	26,705	26,799	27,839	26,199	3,0058	1,6509	emb   CAA44054.1   ADP /ATP translocator [Solanum tuberosum];sp   P25083.1   ADT1_SOLTU RecName: Full=ADP,ATP carrier protein, mitochondrial;
29,01	29,095	29,8125	29,075	29,3023	27,702	26,076	27,851	28,307	28,08	2,3584	1,6556	gb   AAK38603.1   AF355460_1 Cu/Zn-superoxide dismutase, partial [Solanum tuberosum]
28,09	28,893	27,2221	27,369	28,3283	26,763	25,963	26,881	26,075	25,704	2,6473	1,7039	ref   XP_006356575.1   PREDICTED: uncharacterized protein At4g06744-like [Solanum tuberosum]
27,89	27,361	28,0987	27,533	27,9837	24,898	26,74	26,056	26,494	NaN	2,5032	1,727	ref   XP_006348414.1   PREDICTED: probable 2-oxoglutarate-dependent dioxygenase AOP1 [Solanum tuberosum]
30,79	30,34	30,8582	30,469	30,8609	28,104	29,086	29,106	29,178	29,096	4,1988	1,7496	ref   XP_015162131.1   PREDICTED: acetyl-CoA-benzylalcohol acetyltransferase-like [Solanum tuberosum];ref   XP_006342687.1   PREDICTED: acetyl-CoA-benzylalcohol acetyltransferase-like [Solanum tuberosum]

Tabelle E5: Auflistung der signifikant verschieden abundanten Proteine des Vergleichs KI gegen TI.

KI_11	KI_15	KI_19	KI_23	KI_A4	TI_13	TI_17	TI_21	TI_9	TI_A2	-Log Student's T-test p-value KI_TI	Student's T-test Difference KI_TI	Fasta headers
26,8	27,237	27,1907	26,771	26,9066	25,488	25,198	24,872	25,123	NaN	5,069	1,8101	ref   XP_006346175.1   PREDICTED: polygalacturonase inhibitor-like [Solanum tuberosum]
27,75	27,044	27,6486	27,539	27,5043	25,952	NaN	NaN	25,134	NaN	2,9187	1,9537	ref   XP_015166520.1   PREDICTED: tropinone reductase homolog At5g06060-like isoform X1 [Solanum tuberosum];ref
30,35	30,435	30,5917	30,174	30,3882	29,947	28,885	28,407	28,041	26,213	2,0237	2,0888	ref   XP_006347771.1   PREDICTED: annexin D4-like isoform X1 [Solanum tuberosum];ref   XP_006347772.1   PREDICTED: annexin D4-like isoform X2 [Solanum tuberosum]
27,24	27,905	27,5092	27,966	27,1873	26,255	24,75	24,58	26,214	NaN	2,7089	2,1119	ref   XP_006339339.1   PREDICTED: 12-oxophytodienoate reductase 1-like [Solanum tuberosum]
26,06	26,861	27,8647	27,002	26,6604	24,891	NaN	24,677	25,141	24,345	3,206	2,1262	gb   AAD50644.1   ferritin 1, partial [Solanum tuberosum];ref   XP_006359555.1   PREDICTED: ferritin-3, chloroplastic [Solanum tuberosum]
26,9	27,7	26,1964	26,602	27,1105	25,129	24,899	24,6	23,909	NaN	3,3328	2,2671	ref   XP_006353145.1   PREDICTED: probable mannitol dehydrogenase [Solanum tuberosum]
26,81	27,606	26,3395	26,91	27,7591	24,257	NaN	25,032	25,397	23,204	2,8144	2,6116	ref   NP_001305591.1   putative germin-like protein 2-1 precursor [Solanum tuberosum];ref   XP_015165004.1   PREDICTED: putative germin-like protein 2-1 isoform X2 [Solanum tuberosum]

Tabelle E5: Auflistung der signifikant verschieden abundanten Proteine des Vergleichs KI gegen TI.

KI_11	KI_15	KI_19	KI_23	KI_A4	TI_13	TI_17	TI_21	TI_9	TI_A2	-Log Student's T-test p-value KI_TI	Student's T-test Difference KI_TI	Fasta headers
27,86	27,211	28,0947	26,961	26,7087	24,389	24,943	NaN	24,302	NaN	3,5021	2,823	ref   XP_006352884.1   PREDICTED: basic 7S globulin-like isoform X2 [Solanum tuberosum];ref   XP_006352883.1   PREDICTED: basic 7S globulin-like isoform X1 [Solanum tuberosum]
28,66	27,959	26,8114	27,576	28,0461	25,989	23,48	23,96	24,194	26,57	2,6289	2,9727	ref   XP_006367814.1   PREDICTED: kirola-like [Solanum tuberosum]
30,8	30,259	27,2707	28,531	30,3104	27,786	23,736	25,689	27,129	25,497	2,1438	3,4671	gb   AIT42216.1   Kunitz-type inhibitor D, partial [Solanum tuberosum]
32,39	31,085	29,5437	27,648	31,6281	26,186	27,258	26,725	27,262	25,698	2,5661	3,8337	emb   CAA31575.1   unnamed protein product [Solanum tuberosum];sp   P15477.1   PATB2_SOLTU RecName: Full=Patatin-B2;Flags: Precursor
30,03	30,444	28,1885	28,381	29,4995	26,67	23,995	24,432	24,182	NaN	3,2792	4,4877	ref   XP_006353920.1   PREDICTED: kunitz-type serine protease inhibitor DrTI-like [Solanum tuberosum]
29,63	30,944	28,7656	29,913	29,0118	27,286	23,152	24,685	NaN	NaN	2,4001	4,6126	sp   O22508.1   LOX18_SOLTU RecName: Full=Probable linoleate 9S-lipoxygenase 8;gb   AAB81595.1   lipoxygenase [Solanum tuberosum]

## E 4. Code zur statistischen Auswertung in R

### E 4.1 Testung des Effekts der transienten Effektorexpression auf die TRV-Expression

```
head(dat)
str(dat)
# Misserfolg im Datensatz definieren
dat$no_response <- dat$Gesamtanzahl - dat$GFPdsRed
# Wiederholung als Faktorvariable
dat$Wiederholung <- as.factor(dat$Wiederholung)
### Übersichtsgrafik über die Proportionen
# Proportionen [0 bis 1]
dat$GFPdsRed_prop <- dat$GFPdsRed/dat$Gesamtanzahl
dat$no_response_prop <- dat$no_response / dat$Gesamtanzahl
library(reshape2)
datmelt <- melt(dat, measure.vars=c("GFPdsRed_prop", "no_response_prop"))
datmelt
library(ggplot2)
# Grafik mit allen drei Proportionen
ggplot(datmelt, aes(y=value, x=Variante, color=variable))+
  # geom_boxplot()+
  geom_point(position=position_jitter(width=0.1, height=0.0))+
  facet_grid(~Zeitpunkt)+
  theme_bw()+
  ylab("Anteil der Blätter mit GFP Signal [%]")+
  xlab("")
# Auswertung im Generalisieren Linearen Modell (GLM)
fit <- glm(cbind(GFPdsRed, no_response)~Wiederholung+Variante*Zeitpunkt,
  data=dat, family=quasibinomial(link=logit))
summary(fit)
summary(fit)$dispersion
# Devianzanalyse
```

```
anova(fit, test="F")
```

### **# Paarweise Mittelwertvergleiche für die Proportionen Variante**

```
library(lsmmeans)
```

```
comp <- lsmmeans(fit, specs="Variante", contr="pairwise", type="response")
```

```
comp
```

```
comp$lsmmeans
```

```
comp$contrasts
```

```
lsMW <- as.data.frame(cld(comp$lsmmeans, Letters=letters))
```

```
lsMW
```

```
comp$lsmmeans
```

```
ggplot(lsMW, aes(y=prob, x=Variante))+
```

```
  geom_bar(aes(fill=Variante), stat="identity", position="dodge")+
```

```
  geom_errorbar(aes(ymin=prob-SE, ymax=prob+SE),
```

```
    position=position_dodge(0.9), width=0.1)+
```

```
  geom_text(aes(y=prob+SE, label=group), vjust=-0.3, size=4)+
```

```
  geom_point(data=dat, aes(x=Variante, GFPdsRed_prop),
```

```
    position=position_jitter(width=0.05, height=0.0))+
```

```
  theme_bw()+
```

```
  xlab("")+
```

```
  ylab(expression(paste("LS Mittelwerte der Proportion", " ± ", "Standard Fehler"))))
```

### **# Konfidenzintervalle für die aus dem Modell geschätzten LS-Mittelwerte**

```
plot(confint(comp$lsmmeans))
```

```
png(filename="busse_lsmmeans_confint.png", width=25, height=15, units="cm", res=800)
```

```
  plot(confint(comp$lsmmeans))
```

```
dev.off()
```

## E 4.2 Hauptkomponentenanalyse

```
choose.files()
setwd("\\")
dir()
dat <- read.csv2(".csv", header=TRUE, strip.white=TRUE, na.strings = "NaN")
head(dat)
str(dat)
# Entfernen NaN aus Datensatz
datNa <- na.omit(dat)
# Entfernen der Fasta Namem
datNew <- datNa[,c(1:20)]
str(datNew)
colnames(datNew)
datx <- datNa[,c(colnames(datNew))]
# Kurze Übersichtsgrafik über datx
pairs(datx)
# PCA
?prcomp
pc1 <- prcomp(datx, scale. = TRUE)
pc1
# Plots
screplot(pc1)
# Erste und zweite Dimension
biplot(pc1, col=c("lightgrey","blue"), choices=1:2)
# zweite und dritte Dimension
biplot(pc1, col=c("lightgrey","blue"), choices=2:3)
```