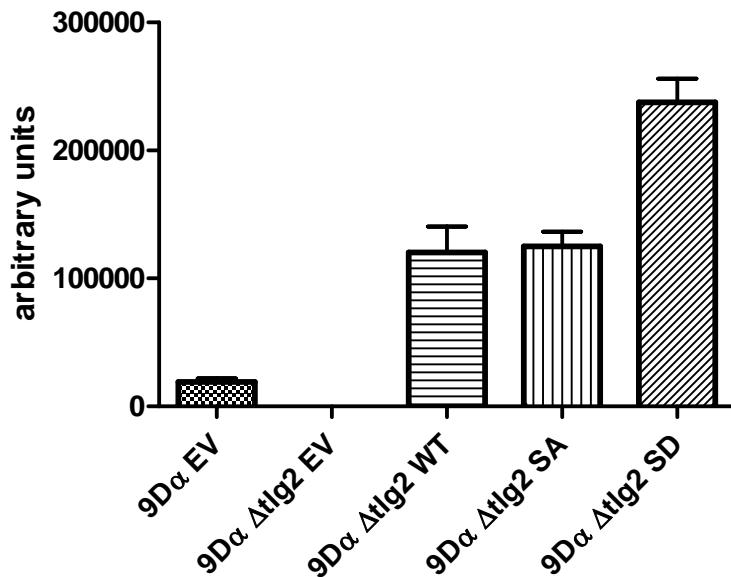


## Appendix 1.: Quantification and statistical analysis of data

Blots from three independent experiments were quantified by AIDA software and data were corrected for background. Statistical analysis was carried out with Graphpad Prsim statistical software.

### One-way analysis of variance



Plot 1.: Levels of protein according to Fig. 7 (pg. 50)  
Error bars represent '±' standard errors of means

Table 1.: Statistical information about Fig. 7 (pg. 50)

One-way analysis of variance

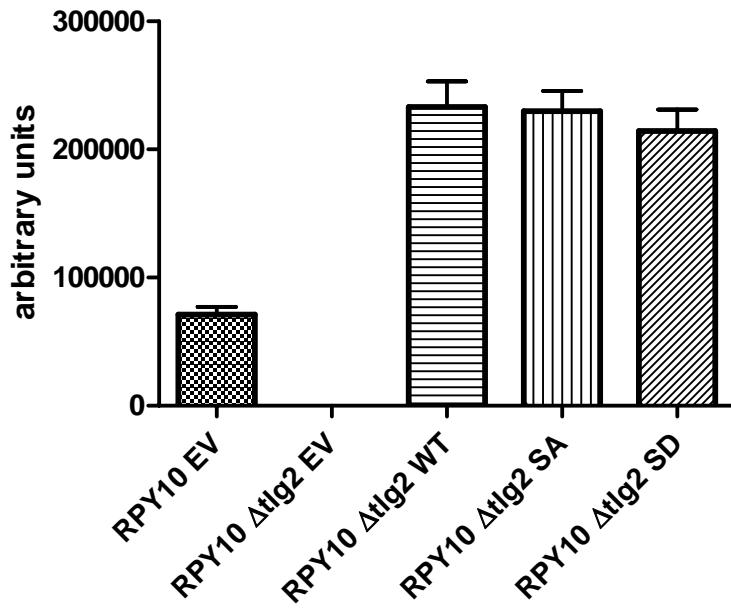
P value < 0.0001

Are means significantly different? (P < 0.05) Yes

Bonferroni's Multiple Comparison Test	Mean Difference	Significant? P < 0,05?	Summary	95% confidence interval of difference
9D $\alpha$ EV vs 9D $\alpha$ Δtlg2 EV	19128	No	ns	-48344 to 86600
9D $\alpha$ EV vs 9D $\alpha$ Δtlg2 WT	-101277	Yes	**	-168749 to -33805
9D $\alpha$ EV vs 9D $\alpha$ Δtlg2 SA	-106028	Yes	**	-173500 to -38556
9D $\alpha$ EV vs 9D $\alpha$ Δtlg2 SD	-218507	Yes	****	-285979 to -151035
9D $\alpha$ Δtlg2 EV vs 9D $\alpha$ Δtlg2 WT	-120405	Yes	***	-187877 to -52933
9D $\alpha$ Δtlg2 EV vs 9D $\alpha$ Δtlg2 SA	-125156	Yes	***	-192628 to -57684
9D $\alpha$ Δtlg2 EV vs 9D $\alpha$ Δtlg2 SD	-237635	Yes	****	-305107 to -170163
9D $\alpha$ Δtlg2 WT vs 9D $\alpha$ Δtlg2 SA	-4751	No	ns	-72223 to 62721
9D $\alpha$ Δtlg2 WT vs 9D $\alpha$ Δtlg2 SD	-117230	Yes	***	-184702 to -49758
9D $\alpha$ Δtlg2 SA vs 9D $\alpha$ Δtlg2 SD	-112479	Yes	**	-179951 to -45007

EV – empty vector, WT – wild type, SA – S90A, SD – S90D

ns - non specific, \* - p < 0.05, \*\* - p < 0.01, \*\*\* - p < 0.001, \*\*\*\* - p < 0.0001



Plot 2.: Levels of protein according to Fig. 8 (pg. 51)  
Error bars represent '±' standard errors of means

Table 2.: Statistical information about Fig. 8 (pg. 51)

One-way analysis of variance

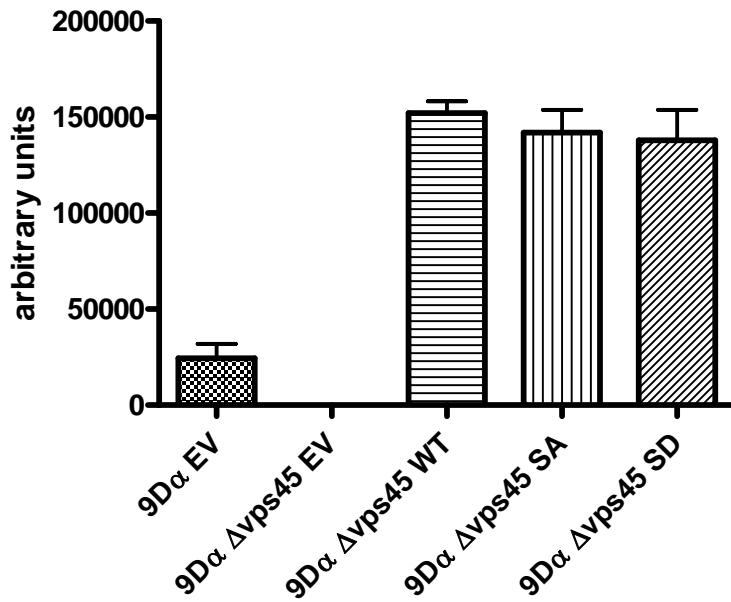
P value < 0.0001

Are means significantly different? (P < 0.05) Yes

Bonferroni's Multiple Comparison Test	Mean Difference	Significant? P < 0,05?	Summary	95% confidence interval of difference
RPY10 EV vs RPY10 Δtlg2 EV	71213	Yes	*	1047 to 141379
RPY10 EV vs RPY10 Δtlg2 WT	-162022	Yes	****	-232189 to -91856
RPY10 EV vs RPY10 Δtlg2 SA	-158714	Yes	***	-228880 to -88547
RPY10 EV vs RPY10 Δtlg2 SD	-143089	Yes	***	-213255 to -72923
RPY10 Δtlg2 EV vs RPY10 Δtlg2 WT	-233235	Yes	****	-303402 to -163069
RPY10 Δtlg2 EV vs RPY10 Δtlg2 SA	-229927	Yes	****	-300093 to -159760
RPY10 Δtlg2 EV vs RPY10 Δtlg2 SD	-214302	Yes	****	-284468 to -144136
RPY10 Δtlg2 WT vs RPY10 Δtlg2 SA	3309	No	ns	-66858 to 73475
RPY10 Δtlg2 WT vs RPY10 Δtlg2 SD	18933	No	ns	-51233 to 89100
RPY10 Δtlg2 SA vs RPY10 Δtlg2 SD	15625	No	ns	-54542 to 85791

EV – empty vector, WT – wild type, SA – S90A, SD – S90D

ns - non specific, \* - p < 0.05, \*\* - p < 0.01, \*\*\* - p < 0.001, \*\*\*\* - p < 0.0001



Plot 3.: Levels of protein according to Fig. 9 (pg. 52)  
Error bars represent '±' standard errors of means

Table 3.: Statistical information about Fig. 9 (pg. 52)

One-way analysis of variance

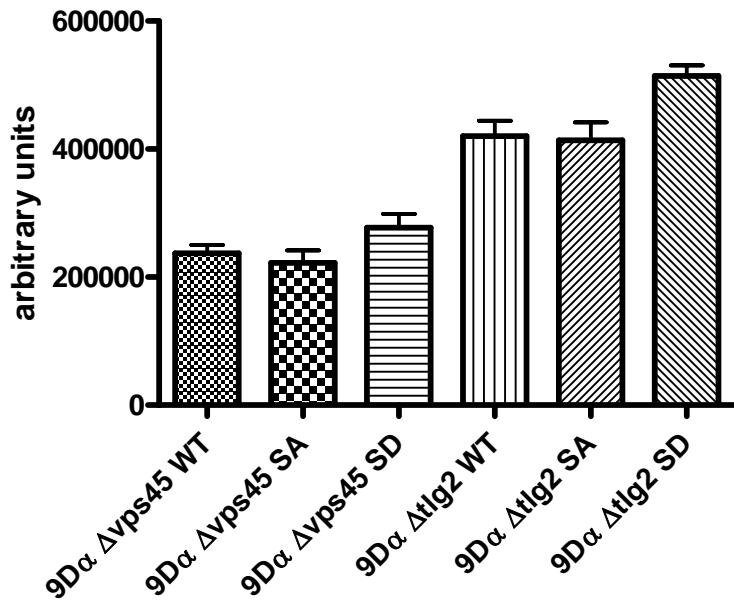
P value < 0.0001

Are means significantly different? (P < 0.05) Yes

Bonferroni's Multiple Comparison Test	Mean Difference	Significant? P < 0,05?	Summary	95% confidence interval of difference
9D $\alpha$ EV vs 9D $\alpha$ Δvps45 EV	24429	No	ns	-25432 to 74290
9D $\alpha$ EV vs 9D $\alpha$ Δvps45 WT	-127624	Yes	****	-177485 to -77763
9D $\alpha$ EV vs 9D $\alpha$ Δvps45 SA	-117517	Yes	****	-167378 to -67656
9D $\alpha$ EV vs 9D $\alpha$ Δvps45 SD	-113408	Yes	***	-163269 to -63547
9D $\alpha$ Δvps45 EV vs 9D $\alpha$ Δvps45 WT	-152053	Yes	****	-201914 to -102192
9D $\alpha$ Δvps45 EV vs 9D $\alpha$ Δvps45 SA	-141946	Yes	****	-191807 to -92085
9D $\alpha$ Δvps45 EV vs 9D $\alpha$ Δvps45 SD	-137837	Yes	****	-187698 to -87976
9D $\alpha$ Δvps45 WT vs 9D $\alpha$ Δvps45 SA	10107	No	ns	-39754 to 59968
9D $\alpha$ Δvps45 WT vs 9D $\alpha$ Δvps45 SD	14216	No	ns	-35645 to 64077
9D $\alpha$ Δvps45 SA vs 9D $\alpha$ Δvps45 SD	4109	No	ns	-45752 to 53970

EV – empty vector, WT – wild type, SA – S90A, SD – S90D

ns - non specific, \* - p < 0.05, \*\* - p < 0.01, \*\*\* - p < 0.001, \*\*\*\* - p < 0.0001



Plot 4.: Levels of protein according to Fig. 10 (pg. 53)  
Error bars represent '±' standard errors of means

Table 4.: Statistical information about Fig. 10 (pg. 53)

One-way analysis of variance

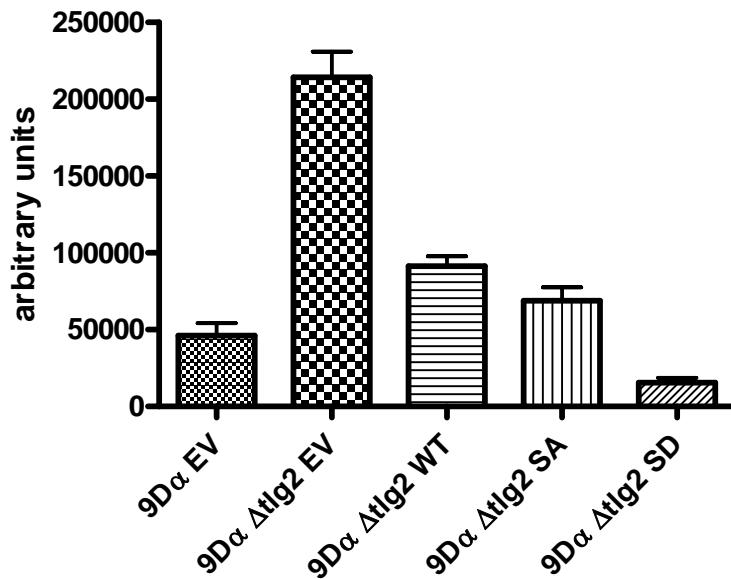
P value < 0.0001

Are means significantly different? (P < 0.05) Yes

Bonferroni's Multiple Comparison Test	Mean Difference	Significant? P < 0,05?	Summary	95% CI of diff
9Dα Δvps45 WT vs 9Dα Δvps45 SA	14923	No	ns	-93572 to 123419
9Dα Δvps45 WT vs 9Dα Δvps45 SD	-39874	No	ns	-148369 to 68621
9Dα Δvps45 WT vs 9Dα ΔIg2p WT	-183087	Yes	***	-291582 to -74592
9Dα Δvps45 SA vs 9Dα Δvps45 SD	-54797	No	ns	-163293 to 53698
9Dα Δvps45 SA vs 9Dα ΔIg2p SA	-191124	Yes	***	-299620 to -82629
9Dα Δvps45 SD vs 9Dα ΔIg2p SD	-236925	Yes	****	-345421 to -128430
9Dα ΔIg2p WT vs 9Dα ΔIg2p SA	6886	No	ns	-101609 to 115381
9Dα ΔIg2p WT vs 9Dα ΔIg2p SD	-93712	No	ns	-202208 to 14783
9Dα ΔIg2p SA vs 9Dα ΔIg2p SD	-100598	No	ns	-209094 to 7897

EV – empty vector, WT – wild type, SA – S90A, SD – S90D

ns - non specific, \* - p < 0.05, \*\* - p < 0.01, \*\*\* - p < 0.001, \*\*\*\* - p < 0.0001



Plot 5.: Levels of protein according to Fig. 11 (pg. 54)  
Error bars represent '±' standard errors of means

Table 5.: Statistical information about Fig. 11 (pg. 54)

One-way analysis of variance

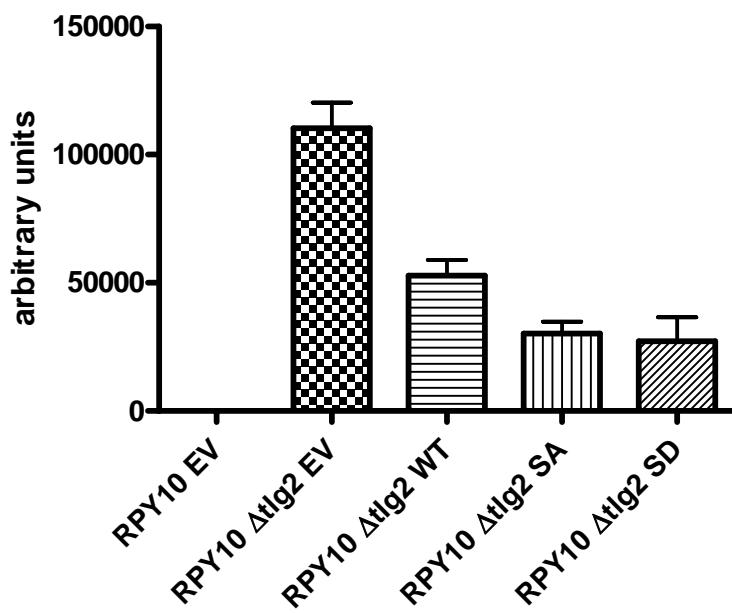
P value < 0.0001

Are means significantly different? (P < 0.05) Yes

Bonferroni's Multiple Comparison Test	Mean Difference	Significant? P < 0,05?	Summary	95% confidence interval of difference
$9D\alpha$ EV vs $9D\alpha \Delta tlg2$ EV	-168288	Yes	****	-217620 to -118957
$9D\alpha$ EV vs $9D\alpha \Delta tlg2$ WT	-45241	No	ns	-94573 to 4091
$9D\alpha$ EV vs $9D\alpha \Delta tlg2$ SA	-22715	No	ns	-72047 to 26616
$9D\alpha$ EV vs $9D\alpha \Delta tlg2$ SD	30580	No	ns	-18752 to 79912
$9D\alpha \Delta tlg2$ EV vs $9D\alpha \Delta tlg2$ WT	123047	Yes	****	73716 to 172379
$9D\alpha \Delta tlg2$ EV vs $9D\alpha \Delta tlg2$ SA	145573	Yes	****	96241 to 194905
$9D\alpha \Delta tlg2$ EV vs $9D\alpha \Delta tlg2$ SD	198868	Yes	****	149537 to 248200
$9D\alpha \Delta tlg2$ WT vs $9D\alpha \Delta tlg2$ SA	22526	No	ns	-26806 to 71857
$9D\alpha \Delta tlg2$ WT vs $9D\alpha \Delta tlg2$ SD	75821	Yes	**	26489 to 125153
$9D\alpha \Delta tlg2$ SA vs $9D\alpha \Delta tlg2$ SD	53295	Yes	*	3964 to 102627

EV – empty vector, WT – wild type, SA – S90A, SD – S90D

ns - non specific, \* - p < 0.05, \*\* - p < 0.01, \*\*\* - p < 0.001, \*\*\*\* - p < 0.0001



Plot 6.: Levels of protein according to Fig. 12 (pg. 55)  
Error bars represent '±' standard errors of means

Table 6.: Statistical information about Fig. 12 (pg. 55)

One-way analysis of variance

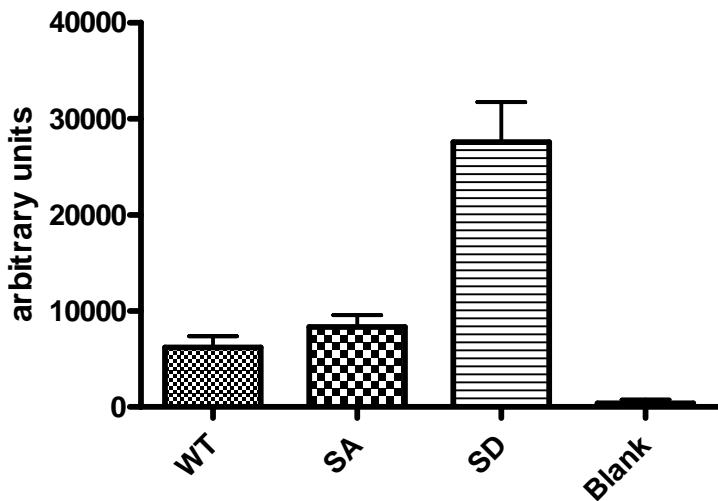
P value < 0.0001

Are means significantly different? (P < 0.05) Yes

Bonferroni's Multiple Comparison Test	Mean Difference	Significant? P < 0,05?	Summary	95% confidence interval of difference
RPY10 EV vs RPY10 Δtlg2 EV	110219	Yes	****	-146046 to -74392
RPY10 EV vs RPY10 Δtlg2 WT	-52757	Yes	**	-88584 to -16929
RPY10 EV vs RPY10 Δtlg2 SA	-30106	No	ns	-65933 to 5721
RPY10 EV vs RPY10 Δtlg2 SD	-27085	No	ns	-62912 to 8742
RPY10 Δtlg2 EV vs RPY10 Δtlg2 WT	57462	Yes	**	21635 to 93290
RPY10 Δtlg2 EV vs RPY10 Δtlg2 SA	80113	Yes	***	44286 to 115940
RPY10 Δtlg2 EV vs RPY10 Δtlg2 SD	83134	Yes	****	47307 to 118961
RPY10 Δtlg2 WT vs RPY10 Δtlg2 SA	22651	No	ns	-13177 to 58478
RPY10 Δtlg2 WT vs RPY10 Δtlg2 SD	25672	No	ns	-10156 to 61499
RPY10 Δtlg2 SA vs RPY10 Δtlg2 SD	3021	No	ns	-32806 to 38848

EV – empty vector, WT – wild type, SA – S90A, SD – S90D

ns - non specific, \* - p < 0.05, \*\* - p < 0.01, \*\*\* - p < 0.001, \*\*\*\* - p < 0.0001



Plot 7.: Levels of protein according to Fig. 16 (pg. 59)  
Error bars represent '±' standard errors of means

Table 7.: Statistical information about Fig. 16 (pg. 59)

One-way analysis of variance

P value = 0.0001

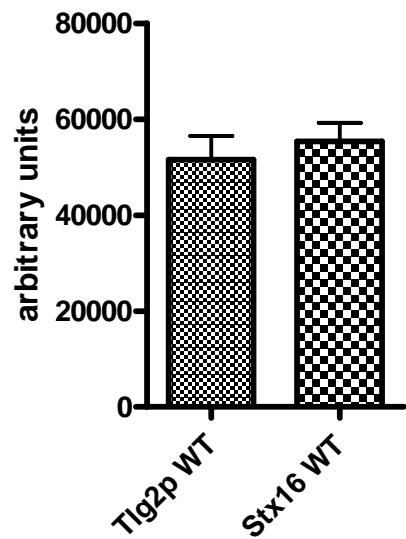
Are means significantly different? (P < 0.05) Yes

Bonferroni's Multiple Comparison Test	Mean Difference	Significant? P < 0,05?	Summary	95% confidence interval of difference
WT vs SA	-2143	No	ns	-13243 to 8957
WT vs SD	-21394	Yes	***	-32494 to -10294
WT vs Blank	5777	No	ns	-5323 to 16877
SA vs SD	-19250	Yes	**	-30350 to -8150
SA vs Blank	7920	No	ns	-3180 to 19020
SD vs Blank	27171	Yes	***	16071 to 38271

WT – wild type, SA – S90A, SD – S90D

ns - non specific, \* - p < 0.05, \*\* - p < 0.01, \*\*\* - p < 0.001, \*\*\*\* - p < 0.0001

Student's T-test



Plot 8.: Levels of protein according to Fig. 18 (pg. 62)

Error bars represent '±' standard errors of means

P value = 0.5808

Significant? (P < 0.05) No