

Supplementary Figure 1. Hrp48 represses translation in concert with SXL. Comparison of the translation efficiencies of WT and 5m Firefly msl-2 reporters in the absence or presence of SXL (SXL/RNA molar ratio of 40). Translation was performed in embryo extracts, and Renilla mRNA was co-translated as an internal control. Firefly luciferase was corrected for Renilla expression and plotted relative to WT mRNA in each condition. The error bars represent standard deviation of 3-9 datapoints.



## Supplementary Figure 2. Hrp48, but not elF3d, inhibits *sxl* expression.

Hrp48 and eIF3d were depleted from Kc cells, and the levels of SXL monitored by Western blot and compared to a control depletion (GFP). Increasing amounts of extract (5, 10 and 20 µg) were loaded to provide a quantitative assessment of SXL levels. The ribosomal protein Stubarista (Sta) is shown as loading control. Quantification of the amount of SXL normalized to Sta and relative to GFP is shown on the right. Error bars represent the standard deviation of quantifications at the three extract amounts loaded.



Supplementary Figure 3. eIF3 subunit RNA levels upon depletion of eIF3d, e or h . Depletion was performed for 4 days, carrying GFP knock-down as negative control. RNA levels were measured by RT-qPCR, normalized for actin and plotted relative to the negative control, which was set to 100% (red line). Error bars represent the standard deviation of 3-4 independent experiments (n).

## Supplementary Table 1: Proteins identified in the eluates of Hrp48 oligo pull-downs (related to Fig 5B)

Protein	Name	Fold change	p value
Q9V3D2	Coproporphyrinogen-III oxidase OS=Drosophila melanogaster GN=Coprox PE=1 SV=1 - [HEM6_DROME]	5,383527853	1,21E-06
P35500	Sodium channel protein para OS=Drosophila melanogaster GN=para PE=2 SV=3 - [SCNA_DROME]	6,266584697	5,10E-06
P48810	Heterogeneous nuclear ribonucleoprotein 87F OS=Drosophila melanogaster GN=Hrb87F PE=2 SV=2 - [RB87F_DROME]	4,770193564	1,32E-05
P07909	Heterogeneous nuclear ribonucleoprotein A1 OS=Drosophila melanogaster GN=Hrb98DE PE=2 SV=1 - [ROA1_DROME]	4,033534477	5,06E-05
018404	3-hydroxyacyl-CoA dehydrogenase type-2 OS=Drosophila melanogaster GN=scu PE=1 SV=1 - [HCD2_DROME]	4,901511495	8,93E-05
P25007	Peptidyl-prolyl cis-trans isomerase OS=Drosophila melanogaster GN=Cyp1 PE=1 SV=2 - [PPIA_DROME]	3,751697056	8,09E-05
P13469	DNA-binding protein modulo OS=Drosophila melanogaster GN=mod PE=1 SV=2 - [MODU_DROME]	4,394107337	0,000160652
P40796	La protein homolog OS=Drosophila melanogaster GN=La PE=1 SV=2 - [LA_DROME]	3,086085448	0,000432356
001367	Protein held out wings OS=Drosophila melanogaster GN=how PE=1 SV=1 - [HOW_DROME]	3,822524003	0,000581246
Q8T8R1	CCHC-type zinc finger protein CG3800 OS=Drosophila melanogaster GN=CG3800 PE=1 SV=1 - [Y3800_DROME]	2,534374453	0,000705428
P07182	Chorion protein S36 OS=Drosophila melanogaster GN=Cp36 PE=3 SV=2 - [CH36_DROME]	2,370073375	0,000914899
Q9VCK0	Eukaryotic translation initiation factor 3 subunit D-1 OS=Drosophila melanogaster GN=eIF-3p66 PE=1 SV=1 - [EI3D1_DROME]	4,472891153	0,001004302
P11420	Protein daughterless OS=Drosophila melanogaster GN=da PE=1 SV=1 - [DA_DROME]	2,998015053	0,001483671
P19109	ATP-dependent RNA helicase p62 OS=Drosophila melanogaster GN=Rm62 PE=1 SV=3 - [DDX17_DROME]	2,033762346	0,001698695
P48809	Heterogeneous nuclear ribonucleoprotein 27C OS=Drosophila melanogaster GN=Hrb27C PE=1 SV=2 - [RB27C DROME]	6.50342964	0.001835391
<b>BE 100</b>		0,00012001	0,002000002
P54397	39 kDa FK506-binding nuclear protein OS=Drosophila melanogaster GN=FK506-bp1 PE=1 SV=2 - [FKB39_DROME]	2,31124762	0,00392438
P54397 Q9XZF0	39 kDa FK506-binding nuclear protein OS=Drosophila melanogaster GN=FK506-bp1 PE=1 SV=2 - [FKB39_DROME] Protein yippee OS=Drosophila melanogaster GN=Yippee PE=1 SV=1 - [YIPP_DROME]	2,31124762 0,859191833	0,00392438 0,006356368
P54397 Q9XZF0 Q08473	39 kDa FK506-binding nuclear protein OS=Drosophila melanogaster GN=FK506-bp1 PE=1 SV=2 - [FKB39_DROME] Protein yippee OS=Drosophila melanogaster GN=Yippee PE=1 SV=1 - [YIPP_DROME] RNA-binding protein squid OS=Drosophila melanogaster GN=sqd PE=1 SV=3 - [SQD_DROME	2,31124762 0,859191833 3,594942837	0,00392438 0,006356368 0,010208335
P54397 Q9XZF0 Q08473 Q9VEW2	39 kDa FK506-binding nuclear protein OS=Drosophila melanogaster GN=FK506-bp1 PE=1 SV=2 - [FKB39_DROME] Protein yippee OS=Drosophila melanogaster GN=Yippee PE=1 SV=1 - [YIPP_DROME] RNA-binding protein squid OS=Drosophila melanogaster GN=sqd PE=1 SV=3 - [SQD_DROME Putative SERF-like protein OS=Drosophila melanogaster GN=CG17931 PE=3 SV=1 - [SERFL_DROME]	2,31124762 0,859191833 3,594942837 3,111798522	0,00392438 0,006356368 0,010208335 0,010038663
P54397 Q9XZF0 Q08473 Q9VEW2 Q9I7T7	39 kDa FK506-binding nuclear protein OS=Drosophila melanogaster GN=FK506-bp1 PE=1 SV=2 - [FKB39_DROME] Protein yippee OS=Drosophila melanogaster GN=Yippee PE=1 SV=1 - [YIPP_DROME] RNA-binding protein squid OS=Drosophila melanogaster GN=sqd PE=1 SV=3 - [SQD_DROME Putative SERF-like protein OS=Drosophila melanogaster GN=CG17931 PE=3 SV=1 - [SERFL_DROME] La-related protein CG11505 OS=Drosophila melanogaster GN=CG11505 PE=1 SV=2 - [Y1505_DROME]	2,31124762 0,859191833 3,594942837 3,111798522 3,320522285	0,00392438 0,006356368 0,010208335 0,010038663 0,011167861
P54397 Q9XZF0 Q08473 Q9VEW2 Q9I7T7 Q9VHP0	39 kDa FK506-binding nuclear protein OS=Drosophila melanogaster GN=FK506-bp1 PE=1 SV=2 - [FKB39_DROME] Protein yippee OS=Drosophila melanogaster GN=Yippee PE=1 SV=1 - [YIPP_DROME] RNA-binding protein squid OS=Drosophila melanogaster GN=sqd PE=1 SV=3 - [SQD_DROME Putative SERF-like protein OS=Drosophila melanogaster GN=CG17931 PE=3 SV=1 - [SERFL_DROME] La-related protein CG11505 OS=Drosophila melanogaster GN=CG11505 PE=1 SV=2 - [Y1505_DROME] ATP-dependent RNA helicase bel OS=Drosophila melanogaster GN=bel PE=1 SV=1 - [DDX3_DROME]	2,31124762 0,859191833 3,594942837 3,111798522 3,320522285 0,638819393	0,00392438 0,006356368 0,010208335 0,010038663 0,011167861 0,013590465
P54397 Q9XZF0 Q08473 Q9VEW2 Q9I7T7 Q9VHP0 Q9VAY7	39 kDa FK506-binding nuclear protein OS=Drosophila melanogaster GN=FK506-bp1 PE=1 SV=2 - [FKB39_DROME] Protein yippee OS=Drosophila melanogaster GN=Yippee PE=1 SV=1 - [YIPP_DROME] RNA-binding protein squid OS=Drosophila melanogaster GN=sqd PE=1 SV=3 - [SQD_DROME Putative SERF-like protein OS=Drosophila melanogaster GN=CG17931 PE=3 SV=1 - [SERFL_DROME] La-related protein CG11505 OS=Drosophila melanogaster GN=CG11505 PE=1 SV=2 - [Y1505_DROME] ATP-dependent RNA helicase bel OS=Drosophila melanogaster GN=bel PE=1 SV=1 - [DDX3_DROME] Protein FAM50 homolog OS=Drosophila melanogaster GN=CG12259 PE=2 SV=1 - [FAM50_DROME]	2,31124762 0,859191833 3,594942837 3,111798522 3,320522285 0,638819393 4,09448207	0,00392438 0,006356368 0,010208335 0,010038663 0,011167861 0,013590465 0,015513207
P54397 Q9XZF0 Q08473 Q9VEW2 Q9I7T7 Q9VHP0 Q9VAY7 P02844	39 kDa FK506-binding nuclear protein OS=Drosophila melanogaster GN=FK506-bp1 PE=1 SV=2 - [FKB39_DROME] Protein yippee OS=Drosophila melanogaster GN=Yippee PE=1 SV=1 - [YIPP_DROME] RNA-binding protein squid OS=Drosophila melanogaster GN=sqd PE=1 SV=3 - [SQD_DROME Putative SERF-like protein OS=Drosophila melanogaster GN=CG17931 PE=3 SV=1 - [SERFL_DROME] La-related protein CG11505 OS=Drosophila melanogaster GN=CG11505 PE=1 SV=2 - [Y1505_DROME] ATP-dependent RNA helicase bel OS=Drosophila melanogaster GN=bel PE=1 SV=1 - [DDX3_DROME] Protein FAM50 homolog OS=Drosophila melanogaster GN=CG12259 PE=2 SV=1 - [FAM50_DROME] Vitellogenin-2 OS=Drosophila melanogaster GN=Yp2 PE=1 SV=2 - [VIT2_DROME]	2,31124762 0,859191833 3,594942837 3,111798522 3,320522285 0,638819393 4,09448207 1,95145009	0,00392438 0,006356368 0,010208335 0,010038663 0,011167861 0,013590465 0,015513207 0,016877668
P54397 Q9XZF0 Q08473 Q9VEW2 Q9I7T7 Q9VHP0 Q9VAY7 P02844 Q9XZS3	39 kDa FK506-binding nuclear protein OS=Drosophila melanogaster GN=FK506-bp1 PE=1 SV=2 - [FKB39_DROME] Protein yippee OS=Drosophila melanogaster GN=Yippee PE=1 SV=1 - [YIPP_DROME] RNA-binding protein squid OS=Drosophila melanogaster GN=sqd PE=1 SV=3 - [SQD_DROME Putative SERF-like protein OS=Drosophila melanogaster GN=CG17931 PE=3 SV=1 - [SERFL_DROME] La-related protein CG11505 OS=Drosophila melanogaster GN=CG11505 PE=1 SV=2 - [Y1505_DROME] ATP-dependent RNA helicase bel OS=Drosophila melanogaster GN=bel PE=1 SV=1 - [DDX3_DROME] Protein FAM50 homolog OS=Drosophila melanogaster GN=CG12259 PE=2 SV=1 - [FAM50_DROME] Vitellogenin-2 OS=Drosophila melanogaster GN=Yp2 PE=1 SV=2 - [VIT2_DROME] Translation machinery-associated protein 7 homolog OS=Drosophila melanogaster GN=CG13364 PE=4 SV=1 - [TMA7_DROME]	2,31124762 0,859191833 3,594942837 3,111798522 3,320522285 0,638819393 4,09448207 1,95145009 1,028687038	0,00392438 0,006356368 0,010208335 0,010038663 0,011167861 0,013590465 0,015513207 0,016877668 0,019026733
P54397 Q9XZF0 Q08473 Q9VEW2 Q9I7T7 Q9VHP0 Q9VAY7 P02844 Q9XZS3 Q05783	39 kDa FK506-binding nuclear protein OS=Drosophila melanogaster GN=FK506-bp1 PE=1 SV=2 - [FKB39_DROME] Protein yippee OS=Drosophila melanogaster GN=Yippee PE=1 SV=1 - [YIPP_DROME] RNA-binding protein squid OS=Drosophila melanogaster GN=sqd PE=1 SV=3 - [SQD_DROME Putative SERF-like protein OS=Drosophila melanogaster GN=CG17931 PE=3 SV=1 - [SERFL_DROME] La-related protein CG11505 OS=Drosophila melanogaster GN=CG11505 PE=1 SV=2 - [Y1505_DROME] ATP-dependent RNA helicase bel OS=Drosophila melanogaster GN=bel PE=1 SV=1 - [DDX3_DROME] Protein FAM50 homolog OS=Drosophila melanogaster GN=CG12259 PE=2 SV=1 - [FAM50_DROME] Vitellogenin-2 OS=Drosophila melanogaster GN=Yp2 PE=1 SV=2 - [VIT2_DROME] Translation machinery-associated protein 7 homolog OS=Drosophila melanogaster GN=HmgD PE=1 SV=1 - [HMGD_DROME]	2,31124762 0,859191833 3,594942837 3,111798522 3,320522285 0,638819393 4,09448207 1,95145009 1,028687038 2,340416268	0,00392438 0,006356368 0,010208335 0,010038663 0,011167861 0,013590465 0,015513207 0,016877668 0,019026733 0,032327205
P54397 Q9XZF0 Q08473 Q9VEW2 Q9I7T7 Q9VHP0 Q9VAY7 P02844 Q9XZS3 Q05783 P02283	39 kDa FK506-binding nuclear protein OS=Drosophila melanogaster GN=FK506-bp1 PE=1 SV=2 - [FKB39_DROME] Protein yippee OS=Drosophila melanogaster GN=Yippee PE=1 SV=1 - [YIPP_DROME] RNA-binding protein squid OS=Drosophila melanogaster GN=sqd PE=1 SV=3 - [SQD_DROME Putative SERF-like protein OS=Drosophila melanogaster GN=CG17931 PE=3 SV=1 - [SERFL_DROME] La-related protein CG11505 OS=Drosophila melanogaster GN=CG11505 PE=1 SV=2 - [Y1505_DROME] ATP-dependent RNA helicase bel OS=Drosophila melanogaster GN=bel PE=1 SV=1 - [DDX3_DROME] Protein FAM50 homolog OS=Drosophila melanogaster GN=CG12259 PE=2 SV=1 - [FAM50_DROME] Vitellogenin-2 OS=Drosophila melanogaster GN=Yp2 PE=1 SV=2 - [VIT2_DROME] Translation machinery-associated protein 7 homolog OS=Drosophila melanogaster GN=HmgD PE=1 SV=1 - [HMGD_DROME] Histone H2B OS=Drosophila melanogaster GN=His2B PE=1 SV=2 - [H2B_DROME]	2,31124762 0,859191833 3,594942837 3,111798522 3,320522285 0,638819393 4,09448207 1,95145009 1,028687038 2,340416268 0,572492012	0,00392438 0,006356368 0,010208335 0,011038663 0,011167861 0,013590465 0,015513207 0,016877668 0,019026733 0,032327205 0,034003908
P54397 Q9XZF0 Q08473 Q9VEW2 Q9I7T7 Q9VHP0 Q9VAY7 P02844 Q9XZS3 Q05783 P02283 P84029	39 kDa FK506-binding nuclear protein OS=Drosophila melanogaster GN=FK506-bp1 PE=1 SV=2 - [FKB39_DROME] Protein yippee OS=Drosophila melanogaster GN=Yippee PE=1 SV=1 - [YIPP_DROME] RNA-binding protein squid OS=Drosophila melanogaster GN=sqd PE=1 SV=3 - [SQD_DROME Putative SERF-like protein OS=Drosophila melanogaster GN=CG17931 PE=3 SV=1 - [SERFL_DROME] La-related protein CG11505 OS=Drosophila melanogaster GN=CG11505 PE=1 SV=2 - [Y1505_DROME] ATP-dependent RNA helicase bel OS=Drosophila melanogaster GN=bel PE=1 SV=1 - [DDX3_DROME] Protein FAM50 homolog OS=Drosophila melanogaster GN=CG12259 PE=2 SV=1 - [FAM50_DROME] Vitellogenin-2 OS=Drosophila melanogaster GN=Yp2 PE=1 SV=2 - [VIT2_DROME] Translation machinery-associated protein 7 homolog OS=Drosophila melanogaster GN=HmgD PE=1 SV=1 - [HMGD_DROME] Histone H2B OS=Drosophila melanogaster GN=His2B PE=1 SV=2 - [H2B_DROME] Cytochrome c-2 OS=Drosophila melanogaster GN=Cyt-c-p PE=1 SV=2 - [CYC2_DROME]	2,31124762 0,859191833 3,594942837 3,111798522 3,320522285 0,638819393 4,09448207 1,95145009 1,028687038 2,340416268 0,572492012 1,201296106	0,00392438 0,006356368 0,010208335 0,011038663 0,011167861 0,013590465 0,015513207 0,016877668 0,019026733 0,032327205 0,034003908 0,033541811
P54397 Q9XZF0 Q08473 Q9VEW2 Q9I7T7 Q9VHP0 Q9VAY7 P02844 Q9XZS3 Q05783 P02283 P84029 Q9VI75	39 kDa FK506-binding nuclear protein OS=Drosophila melanogaster GN=FK506-bp1 PE=1 SV=2 - [FKB39_DROME] Protein yippee OS=Drosophila melanogaster GN=Yippee PE=1 SV=1 - [YIPP_DROME] RNA-binding protein squid OS=Drosophila melanogaster GN=sqd PE=1 SV=3 - [SQD_DROME Putative SERF-like protein OS=Drosophila melanogaster GN=CG17931 PE=3 SV=1 - [SERFL_DROME] La-related protein CG11505 OS=Drosophila melanogaster GN=CG11505 PE=1 SV=2 - [Y1505_DROME] ATP-dependent RNA helicase bel OS=Drosophila melanogaster GN=bel PE=1 SV=1 - [DDX3_DROME] Protein FAM50 homolog OS=Drosophila melanogaster GN=CG12259 PE=2 SV=1 - [FAM50_DROME] Vitellogenin-2 OS=Drosophila melanogaster GN=Yp2 PE=1 SV=2 - [VIT2_DROME] Translation machinery-associated protein 7 homolog OS=Drosophila melanogaster GN=HmgD PE=1 SV=1 - [HMGD_DROME] Histone H2B OS=Drosophila melanogaster GN=His2B PE=1 SV=2 - [H2B_DROME] Cytochrome c-2 OS=Drosophila melanogaster GN=Cyt-c-p PE=1 SV=2 - [CYC2_DROME] Phosphatidylinositol-binding clathrin assembly protein LAP OS=Drosophila melanogaster GN=lap PE=1 SV=3 - [PICA_DROME]	2,31124762 0,859191833 3,594942837 3,111798522 3,320522285 0,638819393 4,09448207 1,95145009 1,028687038 2,340416268 0,572492012 1,201296106 1,480253485	0,00392438 0,006356368 0,010208335 0,011038663 0,011167861 0,013590465 0,015513207 0,016877668 0,019026733 0,032327205 0,034003908 0,033541811 0,043675199