

# Analysis of Births Ratios from Muscle Srebp1/Atg Flies

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## Experimental Design

These data are stored in `/Volumes/bridges_lab/Hatfield/Drosophila/Births`. This script was most recently run on Mon Feb 24 09:14:05 2014

## Strain Summaries

So far this analysis includes **2008** flies from 7 crosses. Statistics are based on a Chi Squared Test, and are adjusted for multiple observation by the method of Benjamini and Hochberg. Counts and p-values are shown in Table 1, 2 and Figure 1 for all drivers, Table 3 for all crosses and Table 4 with gendered crossed data. Summarized per cross the data are below

Driver	Gene	KD	Control	Total	pval	padj
24B-Gal4	Atg5	200	103	303	0.00000	0.00000
24B-Gal4	Atg8a	224	268	492	0.04729	0.04729
24B-Gal4	Atg8b	235	315	550	0.00065	0.00086
24B-Gal4	HLH106	391	272	663	0.00000	0.00001

Table 1: Gene Level Summarised Data

Driver	UAS	KD	Control	Total	pval	padj
24B-Gal4	25975	160	122	282	0.02364	0.02758
24B-Gal4	34073	231	150	381	0.00003	0.00006
24B-Gal4	27551	200	103	303	0.00000	0.00000
24B-Gal4	28989	54	143	197	0.00000	0.00000
24B-Gal4	34340	170	125	295	0.00879	0.01231
24B-Gal4	27554	130	127	257	0.85155	0.85155
24B-Gal4	34900	105	188	293	0.00000	0.00000

Table 2: Driver Level Summarised Data

The key packages used in this analysis were R [1] and plyr [2]

## References

- [1] R Core Team. *R: A Language and Environment for Statistical Computing*. R Foundation for Statistical Computing, Vienna, Austria, 2013.

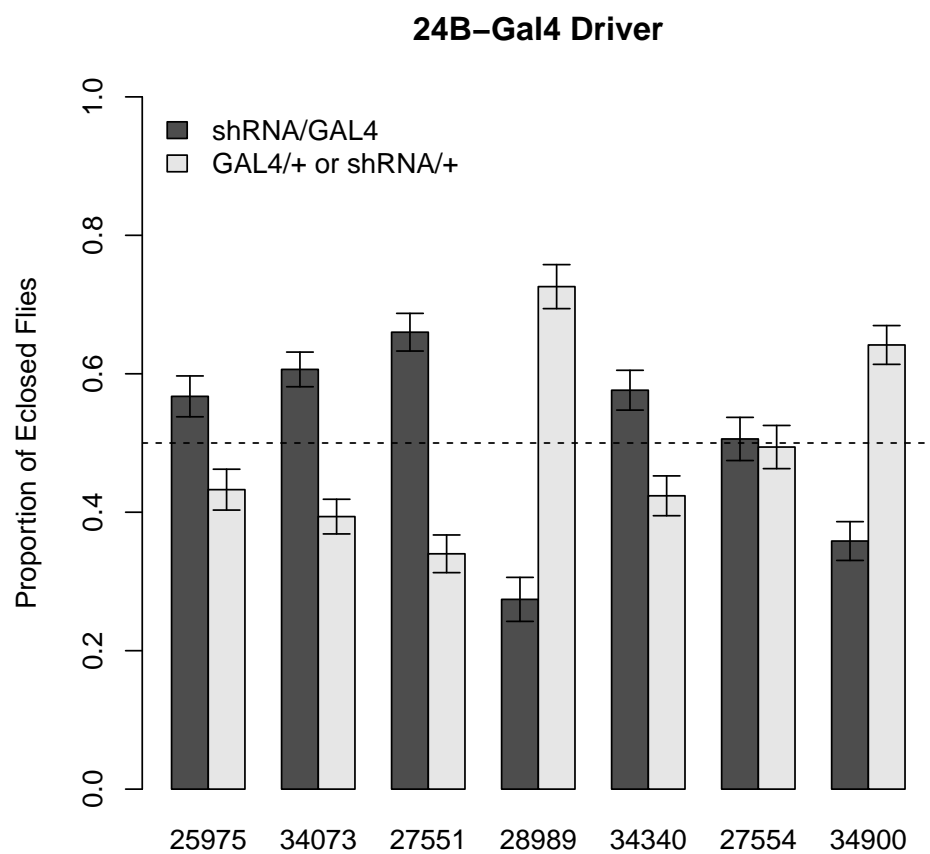


Figure 1: Barplot of Relative Phosphorylation

Cross	KD	Control	Total	pval	padj
25975 x 24B-Gal4/Tm3-sb	160	122	282	0.02364	0.02758
27551 x 24B-Gal4/Tm3-sb	200	103	303	0.00000	0.00000
27554 x 24B-Gal4/Tm3-sb	130	127	257	0.85155	0.85155
28989/Tm3-sb x 24B-Gal4	54	143	197	0.00000	0.00000
34073 x 24B-Gal4/Tm3-sb	231	150	381	0.00003	0.00006
34340 x 24B-Gal4/Tm3-sb	170	125	295	0.00879	0.01231
34900 x 24B-Gal4/Tm3-sb	105	188	293	0.00000	0.00000

Table 3: Cross Level Summarised Data

UAS	Driver	Gender	KD	Control	Total	pval	padj
25975	24B-Gal4	Female	89	76	165	0.31151	0.39647
25975	24B-Gal4	Male	71	46	117	0.02082	0.02915
34073	24B-Gal4	Female	111	72	183	0.00394	0.00689
34073	24B-Gal4	Male	120	78	198	0.00284	0.00568
27551	24B-Gal4	Female	102	55	157	0.00018	0.00062
27551	24B-Gal4	Male	98	48	146	0.00004	0.00016
28989	24B-Gal4	Female	26	57	83	0.00067	0.00187
28989	24B-Gal4	Male	28	86	114	0.00000	0.00000
34340	24B-Gal4	Female	75	69	144	0.61708	0.66454
34340	24B-Gal4	Male	95	56	151	0.00150	0.00351
27554	24B-Gal4	Female	73	67	140	0.61209	0.66454
27554	24B-Gal4	Male	57	60	117	0.78151	0.78151
34900	24B-Gal4	Female	60	94	154	0.00615	0.00956
34900	24B-Gal4	Male	45	94	139	0.00003	0.00016

Table 4: Gendered and Cross Level Summarised Data

- [2] Hadley Wickham. The split-apply-combine strategy for data analysis. *Journal of Statistical Software*, 40(1):1–29, 2011.

## Session Information

- R version 3.0.2 (2013-09-25), x86\_64-apple-darwin10.8.0
- Locale: en\_US.UTF-8/en\_US.UTF-8/en\_US.UTF-8/C/en\_US.UTF-8/en\_US.UTF-8
- Base packages: base, datasets, graphics, grDevices, methods, stats, utils
- Other packages: bibtex 0.3-6, plyr 1.8, RColorBrewer 1.0-5, xtable 1.7-1
- Loaded via a namespace (and not attached): tools 3.0.2