

Table S5 Dietary Change in Gene Expression measured by qRT-PCR

GENE	p_{diet}	RSq_{diet}	Sig_{diet}	Low in
amos	0.31	0.01		
BBS8	0.17	0.05		
beg	0.02	0.15	*	
BG4	2E-09	0.66	***	HF
CG10336	3E-05	0.42	***	HF
CG10505	0.31	0.01		
CG11035	0.39	0.00		
CG11251	0.02	0.16	*	
CG1138	5E-06	0.47	***	Sugar
CG11865	1E-05	0.44	***	HF, LS
CG12030	0.01	0.20	**	HS
CG13800	0.59	0.00		
CG14823	7E-06	0.46	***	HS
CG14826	0.07	0.09		
CG15506	7E-08	0.59	***	Sugar
CG31099	7E-06	0.46	***	Sugar
CG3124	7E-06	0.47	***	Sugar
CG3199	2E-06	0.50	***	Sugar
CG32982	3E-05	0.42	***	Sugar
CG34275	0.95	0.00		
CG3748	0.88	0.00		
CG4650	0.02	0.17	*	High Cal
CG8525	0.39	0.00		
cv-c	0.18	0.05		
daw	0.03	0.14	*	HF
Den1	0.003	0.25	**	High Cal
Dg	3E-04	0.34	**	High Cal
DmsR-1	5E-08	0.60	***	Sugar
dro3	0.64	0.00		
Gli	0.75	0.00		
Gr64e	0.07	0.09		
heph	0.0001	0.37	**	HF
IM2	0.05	0.11	*	High Cal
Lip4	0.07	0.09		
PH4αSG1	0.21	0.03		
PpD6	0.02	0.15	*	LS
Psf2	0.0001	0.37	**	HF
raw	0.33	0.01		
scramb1	0.16	0.05		
scrt	0.25	0.02		
Src64B	4E-08	0.60	***	HF

p_{diet} is the p-value associated with the R-squared measure by ANOVA for differential expression between the three diets (High Fat, HF; High Sugar, HS; and Low Sugar, LS), where gene expression was measured in a pool of 10 whole flies for each of 8 inbred lines for one replicate of each diet. The “Low In” column shows which diet(s) show the lower expression (higher Ct values) where High Calorie is both High Fat and High Sugar, and Sugar implies lower expression on both high and low sugar diets. Significance is summarized as * 0.05 > p > 0.01 ** 0.01 > p > 0.0001 *** p < 0.0001