

**Supplemental table S2.** *Ler x Cvi short-chain aliphatic seed GS-OX Analysis*

Marker	DF	TIII SS	F	P
GSAOPp	1	3.00	55.90	<0.001
HH375	1	0.25	4.81	0.030
GH157	1	0.18	3.40	0.068
GSELONG	1	1.54	28.76	<0.001
GH157*HH375	1	0.25	4.80	0.030

ANOVA was utilized to test previous short-chain glucosinolate data from the *Ler x Cvi* RIL population for QTL located at the position of the two FMO<sub>GS-OX</sub> clusters. These two markers are HH375 and GH157. In addition any previously identified significant main-effect QTL were included in the ANOVA. Type III Sums-of-squares, F value and P value for each term are presented