

Table S3: Genes in body weight chromosome 4 QTL interval.

Gene Symbol	Gene Name	Start location	Gene Function (UniProt)	Non-synonymous variants in founders with the haplotype effect†
Ccser1	coiled-coil serine-rich protein 1	91235885	Unknown, has been associated with cocaine	None
LOC103692146	uncharacterized	91601766	Unknown	None
LOC108350840	uncharacterized	91959690	Unknown	None
LOC108350839	high mobility group protein B1-like	92431517	Unknown	None
LOC103692148	developmental pluripotency-associated protein 2 pseudogene	92443293	Unknown	None
LOC103692149	axoneme-associated protein mst101(2)-like	92501663	Unknown	None
LOC103692147	glutamate receptor ionotropic, delta-2-like	93012791	Unknown	None
Hint1-ps1	histidine triad nucleotide binding protein 1, pseudogene 1	93405665	Pseudogene, likely not functional	None
LOC103692150	thyrotropin receptor pseudogene	93447412	Unknown	None
LOC108350813	Ig kappa chain V-II region 26-10-like	93857773	Unknown	None
Grid2	glutamate ionotropic receptor delta type subunit 2	94068112	Receptor for glutamate. L-glutamate acts as an excitatory neurotransmitter at many synapses in the central nervous system.	None

The gene in bold (Grid2) is the most likely candidate in the region.

†Body Weight chromosome 4 haplotype effects: ACI, BUF, F344 and MR haplotypes lead to decreased body weight while BN haplotype leads to increased body weight (Figure 7D).