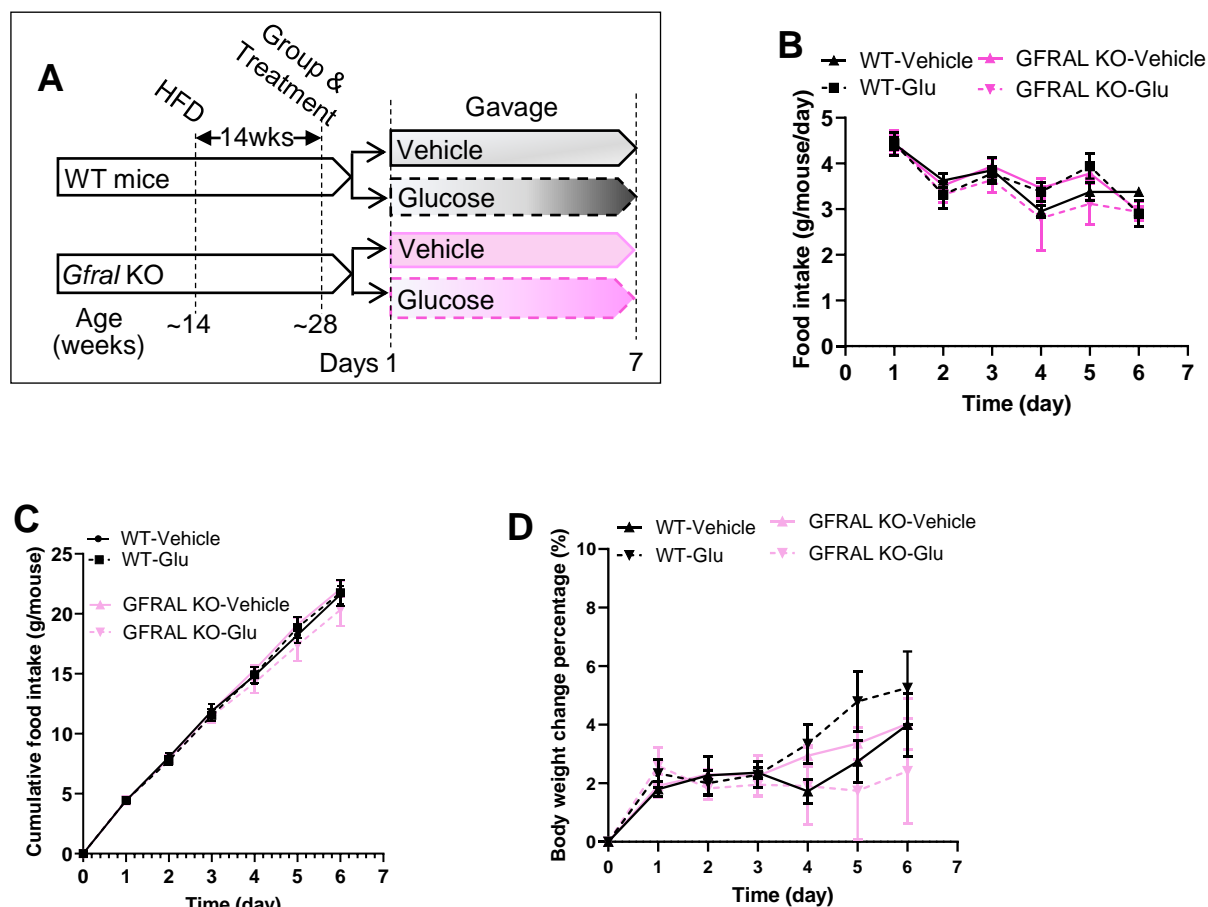


**Supplementary Figure 1.** (A) GLP1, (B) insulin and (C) Ghrelin levels in serum from mice after treatment with LA for 7 days. Data are mean  $\pm$  SEM,  $n = 4-6$  mice/group.  $P$  values were calculated using one-way analysis of variance (ANOVA) with Šídák's multiple comparisons test.



**Supplementary Figure 2.** An equal caloric load of glucose compared to linolenic acid does not reduce appetite and body mass in WT or GFRAL KO mice. A, Experimental scheme for the effects of treatment with glucose (Glu, 9 kcal/kg/day) in both WT and GFRAL KO mice. B, Daily food intake. Data are mean  $\pm$  SEM, n = 4-5 mice/group. C, Cumulative food intake. Data are mean  $\pm$  SEM, n = 4-5 mice/group. D, Body weight change. Data are mean  $\pm$  SEM, n = 4-5 mice/group. *P* values were calculated using one-way analysis of variance (ANOVA) with Šídák's multiple comparisons test.