

Supplementary data

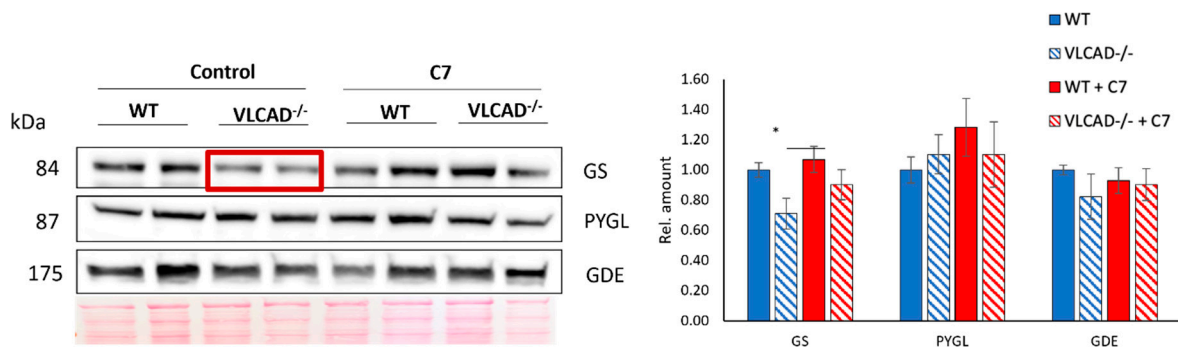


Figure S1. VLCAD^{-/-} mice affected protein expression of glycogen metabolism. $n = 10-12$. Mice groups consisted of both sexes. Significant differences were measured using two-way ANOVA test; * adjusted p value (q) < 0.05

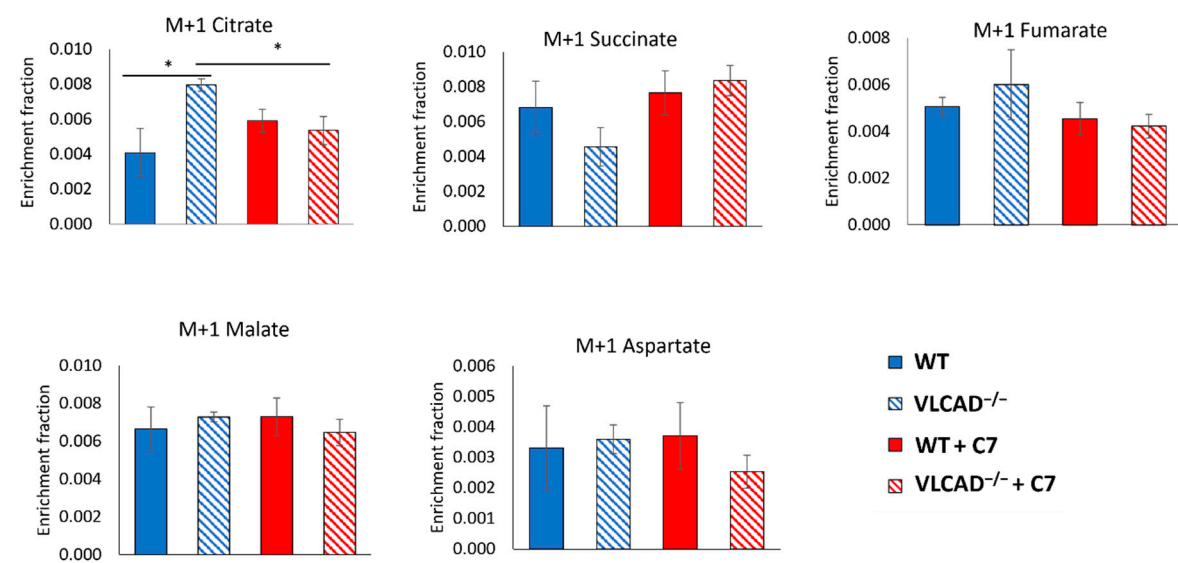


Figure S2. The fractional of M+1 enrichment in liver TCA cycle intermediates. $n = 10-12$. Mice groups consisted of both sexes. Significant differences were measured using two-way ANOVA test; * adjusted p value (q) < 0.05.

Table S1. The fractional ^{13}C enrichment in the example metabolite (pyruvate) of unlabeled sample (A) and labeled sample (B) after isotope correction.

A

	average				s.e.m.			
	WT	VLCAD ^{-/-}	WT+C7	VLCAD ^{-/-} +C7	WT	VLCAD ^{-/-}	WT + C7	VLCAD ^{-/-} + C7
M+0	1.000	1.000	1.000	1.000	0.000	0.000	0.001	0.001
M+1	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001
M+2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001
M+3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

B

	average				s.e.m.			
	WT	VLCAD ^{-/-}	WT+C7	VLCAD ^{-/-} +C7	WT	VLCAD ^{-/-}	WT+C7	VLCAD ^{-/-} +C7
M+0	0.996	0.995	0.996	0.996	0.000	0.001	0.001	0.000
M+1	0.002	0.001	0.001	0.002	0.000	0.001	0.000	0.000
M+2	0.001	0.001	0.001	0.001	0.000	0.000	0.000	0.000
M+3	0.002	0.004	0.003	0.002	0.000	0.000	0.001	0.000

Table S2. The fractional ^{13}C enrichment in TCA cycle metabolite: citrate (A), succinate (B), malate (C), and fumarate (D).

A

	average				s.e.m.			
	WT	KO	C7_WT	C7_KO	WT	KO	C7_WT	C7_KO
M+0	0.993	0.988	0.992	0.992	0.001	0.001	0.001	0.001
M+1	0.004	0.008	0.006	0.005	0.001	0.000	0.001	0.001
M+2	0.004	0.004	0.002	0.003	0.000	0.001	0.001	0.001
M+3	0.000	0.001	0.001	0.001	0.000	0.000	0.000	0.000
M+4	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
M+5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

B

	average				s.e.m.			
	WT	KO	C7_WT	C7_KO	WT	KO	C7_WT	C7_KO
M+0	0.989	0.988	0.988	0.987	0.002	0.001	0.002	0.001
M+1	0.007	0.005	0.008	0.008	0.001	0.001	0.001	0.001
M+2	0.003	0.007	0.004	0.006	0.001	0.001	0.001	0.001
M+3	0.000	0.001	0.000	-0.001	0.000	0.000	0.000	0.000
M+4	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000

C

	average				s.e.m.			
	WT	KO	C7_WT	C7_KO	WT	KO	C7_WT	C7_KO

