

SUPPLEMENTARY DATA

Supplementary Table 1. Summary of the effects of leptin treatment compared to saline treatment on insulin sensitivity and metabolism in WT, $\gamma 3^{R225Q}$, *ob/ob* and *ob/ob*- $\gamma 3^{R225Q}$ mice.

	WT	$\gamma 3^{R225Q}$	<i>ob/ob</i>	<i>ob/ob</i> - $\gamma 3^{R225Q}$
Food intake	↓	↓	↓	↓
Body weight change	↓	↔	↓	↓
Fat mass change	↔	↔	↓	↓
Lean mass change	↔	↔	↔	↔
Plasma glucose change	↔	↔	↔	↓
Gastrocnemius muscle:				
Glycogen content	↔	↔	↓	↔
GLUT4 abundance	↔	↔	↔	↔
Triglyceride content	↔	↔	↔	↔
DAG content	↔	↔	↔	↔
Ceramide content	↔	↔	↔	↔
pAMPK ^{Thr172}	↔	↔	↔	↑
pACC α^{Ser79} / β^{Ser212} and $\beta^{Ser219/221}$	↔	↔	↔	↔