



Figure 1 - Supplement 2: Effects of social isolation on social behavior

(A) Experimental design: WT mice were isolated between P28 and P35 or kept in group. After isolation, mice were subjected to Novel object recognition and Elevated plus maze (same cohorts). (B) Novel object recognition task experimental paradigm. (C-D) Preference index during familiarization phase calculated as object1 interaction time/(object1+object2) or object2 interaction time/(object1+object2) (Grouped: Paired-samples t-test $t_{(9)}=2.181$ $p=0.0571$ $n=10$, Isolated: Paired-samples t-test $t_{(9)}=0.5301$ $p=0.6088$ $n=10$). (E-F) Preference index during novelty phase calculated as object1 interaction time/(object1+object3) or object3 interaction time/(object1+object3) (Grouped: Paired-samples t-test $t_{(9)}=2.276$ $p=0.0489$ $n=10$, Isolated: Paired-samples t-test $t_{(9)}=4.487$ $p=0.0015$ $n=10$). (G) Distance moved (Unpaired sample t-test $t_{(18)}=0.4078$ $p=0.6434$, Grouped $n=10$, Isolated $n=10$). (H) Elevated Plus Maze experimental paradigm. (I) Distance moved (Unpaired sample t-test $t_{(18)}=3.419$ $p=0.0031$, Grouped $n=10$, Isolated $n=10$). (J) Time spent in compartment (One-way RM-ANOVA followed by Tukey's multiple comparisons test. Grouped; compartment main effect $F_{(1,306,11.76)}=50.54$ $p<0.001$, $n=10$; Isolated: compartment main effect $F_{(1,182,10.64)}=56.21$ $p<0.001$ $n=10$). (K-L) Preference index calculated as time in open arm/(open+close) or time in close arm/(open+close) (Grouped: Paired-samples t-test $t_{(9)}=8.101$ $p<0.001$ $n=10$, Isolated: Paired-samples t-test $t_{(9)}=7.025$ $p<0.001$ $n=10$). (M) social-Conditioning Place Preference task experimental paradigm. (N) Time in chamber during Pre-test (Grouped: Paired-samples t-test $t_{(9)}=1.448$ $p=0.1815$, Isolated: Paired-samples t-test $t_{(9)}=1.157$ $p=0.2772$; Two-way RM-ANOVA, Chamber main effect $F_{(1,18)}=3.372$ $p=0.0829$, House condition main effect $F_{(1,18)}=1.027$ $p=0.3243$, Chamber x House condition $F_{(1,18)}=0.02581$ $p=0.8742$, $n=10$). (O) Time in chamber during Post-test (Grouped: # Paired-samples t-test $t_{(9)}=2.297$ $p=0.0472$, Isolated: # Paired-samples t-test $t_{(9)}=3.075$ $p=0.0132$; Two-way RM-ANOVA, Chamber main effect $F_{(1,18)}=14.73$ $p=0.0012$, House condition main effect $F_{(1,18)}=0.1818$ $p=0.6749$, Chamber x House condition $F_{(1,18)}=1.279$ $p=0.273$, $n=10$). (P) Time in social chamber during Pre/Post-test (Grouped: # Paired-samples t-test $t_{(9)}=3.183$ $p=0.0111$, Isolated: ### Paired-samples t-test $t_{(9)}=6.638$ $p<0.001$; Two-way RM-ANOVA, House condition main effect $F_{(1,18)}=0.9767$ $p=0.3361$, Time main effect $F_{(1,18)}=33.81$ $p<0.001$, Time x House condition $F_{(1,18)}=0.01413$ $p=0.9067$, $n=10$). (Q-R) Preference score for social chamber (Grouped: Paired-samples t-test $t_{(9)}=2.323$ $p=0.0452$, Isolated: Paired-samples t-test $t_{(9)}=4.118$ $p=0.0026$, $n=10$). Data are represented as mean \pm SEM.