



**Figure 1 - Supplementary Figure 3: Effects of social isolation during adulthood**

(A) Experimental design: WT mice were isolated between P53 and P60 or kept in group. After isolation, mice were subjected to different behavioral task. (B) Free direct interaction task paradigm. (C) Time exploring social stimulus (Unpaired-samples t-test,  $t_{(20)}=2.237$   $p=0.0369$ , Grouped  $n=12$ , Isolated  $n=10$ ). (D) Time exploring object (Unpaired-samples t-test,  $t_{(19)}=1.876$   $p=0.0761$ , Grouped  $n=12$ , Isolated  $n=9$ ). (E) Three-chamber task experimental paradigm. (F) Interaction time with object or social stimulus 1 (Paired sample t-test. ### Grouped:  $t_{(9)}=4.941$ ,  $p<0.01$ ,  $n=10$ . ## Isolated:  $t_{(9)}=4.082$ ,  $p=0.0027$ . Two-way RM-ANOVA. Target main effect  $F_{(1,18)}=40.32$   $p<0.001$ ; House condition main effect  $F_{(1,18)}=0.02823$   $p=0.8684$ ; Target x House condition  $F_{(1,18)}=0.1188$   $p=0.7343$ ,  $n=10$ ). (G) Time in chamber during social preference phase (One-way RM-ANOVA followed by Tukey's multiple comparisons test. Grouped; chamber main effect  $F_{(1,270,11.43)}=71.56$   $p<0.001$ ,  $n=10$ ; Isolated: chamber main effect  $F_{(1,594,14.35)}=75.35$   $p<0.001$ ,  $n=10$ ). (H) Preference index calculated as object interaction time/(object+stimulus1) or stimulus1 interaction time/(object+stimulus1) (One-sample t-test against chance level 0.5; ### Grouped  $t_{(9)}=5.329$   $p<0.001$ ; ## Isolated  $t_{(9)}=4.026$   $p=0.003$ ). (I) Interaction time with stimulus 1 (familiar) and stimulus 2 (unfamiliar) (Paired sample t-test. ### Grouped:  $t_{(9)}=4.736$ ,  $p=0.0011$ ; ### Isolated:  $t_{(9)}=4.939$ ,  $p<0.001$ . Two-way RM-ANOVA. Target main effect  $F_{(1,18)}=46.45$   $p<0.001$ ; House condition main effect  $F_{(1,18)}=0.4045$   $p=0.5328$ ; Target x House condition  $F_{(1,18)}=0.1068$   $p=0.7476$ ,  $n=10$ ). (J) Time in chamber during social preference phase (One-way RM-ANOVA followed by Tukey's multiple comparisons test. Grouped; chamber main effect  $F_{(1,871,16.84)}=36.35$   $p<0.001$ ,  $n=10$ ; Isolated: chamber main effect  $F_{(1,993,17.93)}=46.27$   $p<0.001$ ,  $n=10$ ). (K) Preference index calculated as stimulus1 interaction time/(stimulus1+stimulus2) or stimulus2 interaction time/(stimulus1+stimulus2) (One-sample t-test against chance level 0.5; ## Grouped  $t_{(9)}=4.494$   $p=0.0015$ ; ### Isolated  $t_{(9)}=5.502$   $p<0.001$ ). (L) Distance moved during the 3-chamber task (Social preference: Mann Whitney test  $U=13$ ,  $p=0.0039$ . Social novelty: Unpaired samples t-test  $t_{(18)}=2.26$   $p=0.0364$ ,  $n=10$  mice each group). Data are represented as mean  $\pm$  SEM.