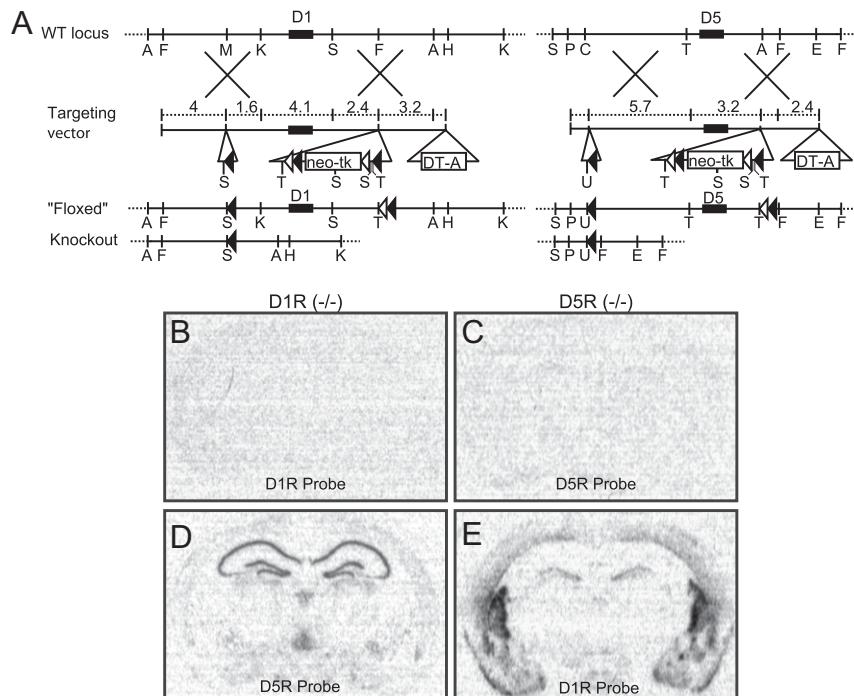
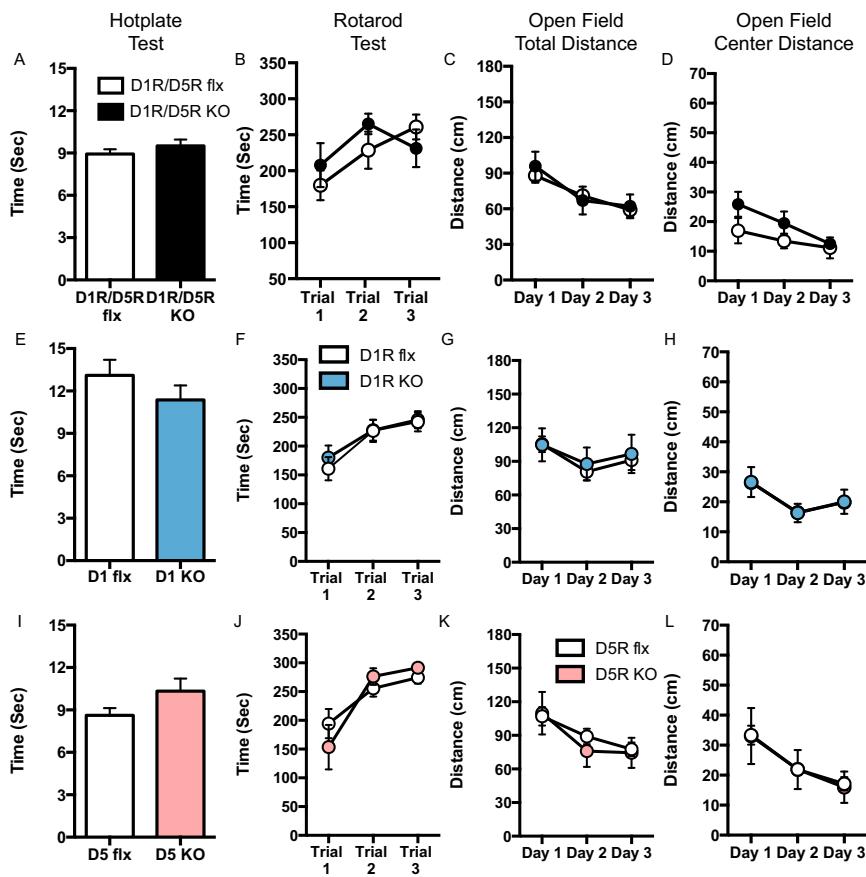


# Supporting Information

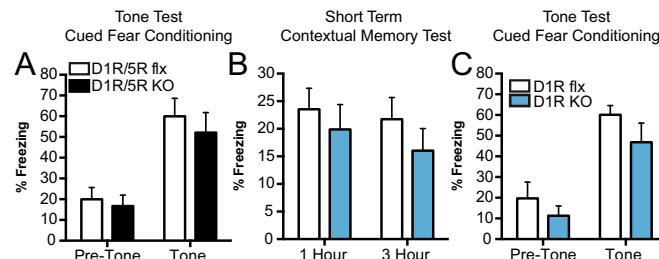
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**Fig. S1.** Generation of knockout mice. (A, Top) Wild-type loci (D1, Left; D5, Right). The coding regions are indicated as filled boxes. (Middle) Targeting vectors where a loxP site was inserted 5' of the coding regions, a LFNT cassette was inserted 3' of the coding regions, and a diphtheria toxin A (DT-A) marker was inserted at the 3' end. The floxed D1 and D5 gene (Bottom). (B and D) D1R<sup>-/-</sup> D1R mRNA probe (B) and D5 mRNA probe (D). (C and E) D5R<sup>-/-</sup> D5 mRNA probe (C) and D1 mRNA probe (E).



**Fig. S2.** Pain sensitivity, anxiety, and motor activity is normal in KO mice. (A, E, and I) Hotplate sensitivity test (D1R/D5R flx,  $n = 10$ ; KO,  $n = 8$ ; D1R flx,  $n = 17$ ; KO,  $n = 13$ ; D5R flx,  $n = 14$ ; KO,  $n = 7$ ). (B, F, and J) Rotarod motor test (D1R/D5R flx,  $n = 8$ ; KO,  $n = 7$ ; D1R flx,  $n = 18$ ; KO,  $n = 21$ ; D5R flx,  $n = 14$ ; KO,  $n = 7$ ). (C, G, and K) Open field total distance (D1R/D5R flx,  $n = 6$ ; KO,  $n = 9$ ; D1R flx,  $n = 28$ ; KO,  $n = 26$ ; D5R flx,  $n = 16$ ; KO,  $n = 7$ ). (D, H, and L) Open field center distance (D1R/D5R flx,  $n = 6$ ; KO,  $n = 9$ ; D1R flx,  $n = 28$ ; KO,  $n = 26$ ; D5R flx,  $n = 16$ ; KO,  $n = 7$ ).



**Fig. S3.** Short-term and cued-fear memory. (A) D1R/D5R KO line cued-fear conditioning tone test. (flx = 8, KO = 8). (B) DG D1R KO Line 1 h (flx = 8, KO = 10) and 3 h (flx = 11, KO = 8) short-term memory test. (C) DG D1R KO line cued-fear conditioning tone test (flx = 8, KO = 6).