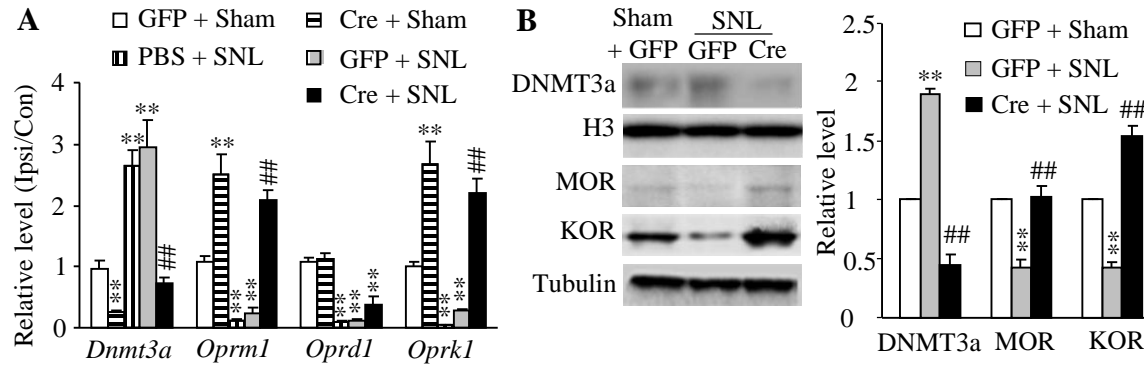
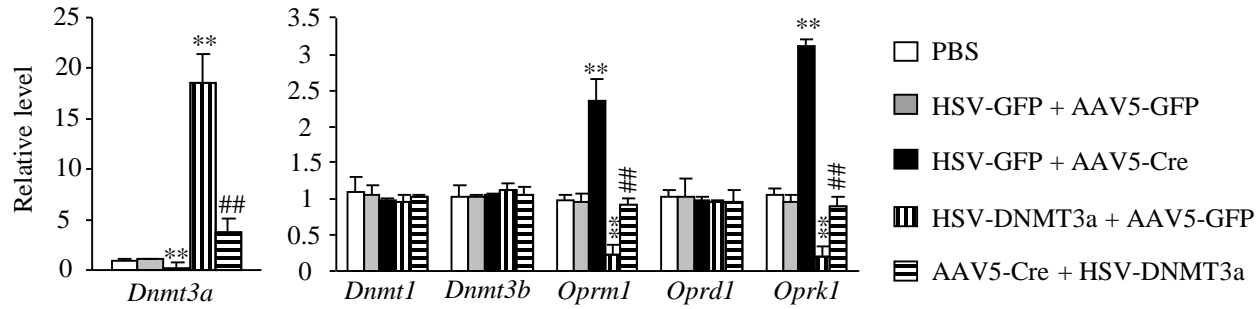


Supplementary figure 1. Expression of DNMT3b, DNMT1, and mTOR proteins in the ipsilateral L4/5 DRGs of naive rats 5 weeks after DRG microinjection of PBS, AAV5-*Dnmt3a* shRNA (ShRNA) or AAV5-scrambled shRNA (Scr). Left: representative Western blots. Right: statistical summary of the densitometric analysis.

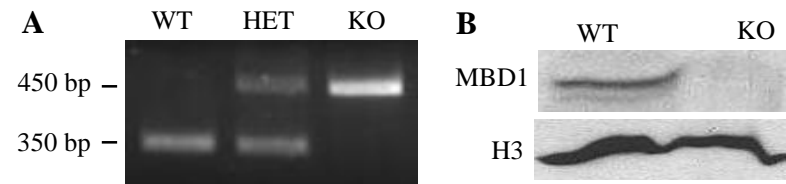


Supplementary figure 2. DNMT3a participates in nerve injury-induced downregulation of MOR and KOR expression in mouse injured DRG. Expression of *Dnmt3a*, *Oprm1*, *Oprd1*, and *Oprk1* mRNAs in the ipsilateral (Ipsi) or contralateral (Con) L4 DRGs (**A**) and expression of DNMT3a, MOR, and KOR proteins in the ipsilateral L4 DRG (**B**) on day 7 after L4 SNL or sham surgery in the *Dnmt3a^{fl/fl}* mice. SNL or sham surgery was carried out 5 weeks after microinjection of PBS, AAV5-*Cre* (Cre), or AAV5-GFP (GFP) into unilateral L4 DRG in mice. n = 12 mice/group. ***P* < 0.01 vs the corresponding sham plus GFP group. ##*P* < 0.01 vs the corresponding SNL plus GFP group.

Supplementary Fig. 3



Supplementary figure 3. DNMT3a regulation of MOR and KOR expression in the cultured mouse DRG neurons. Expression of *Dnmt3a*, *Dnmt3b*, *Dnmt1*, *Oprm1*, *Oprd1*, and *Oprk1* mRNAs in the cultured DRG neurons of *Dnmt3a^{fl/fl}* mice. The cultured neurons were treated with PBS or transduced as indicated.



Supplementary figure 4. Representative tail genotyping from Wild type (WT), heterozygous (HET), and *Mbd1* knockout (KO) mice (**A**) and representative Western blots from the DRGs of wildtype and *Mbd1* KO mice (**B**).