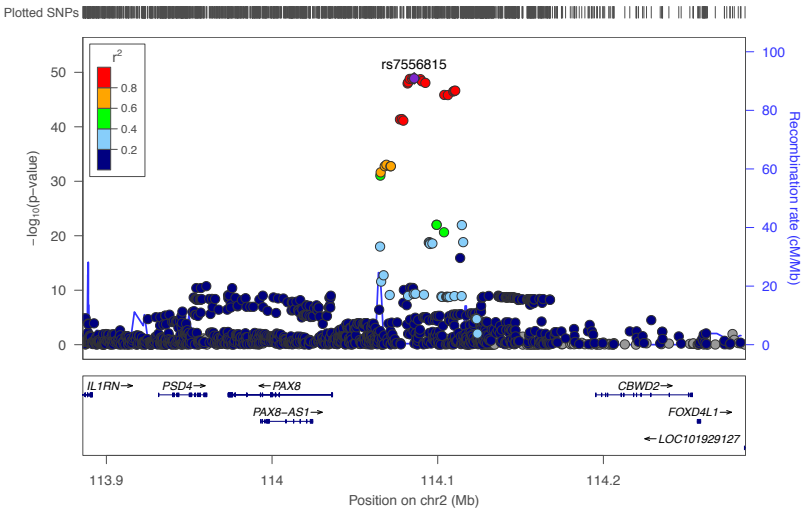
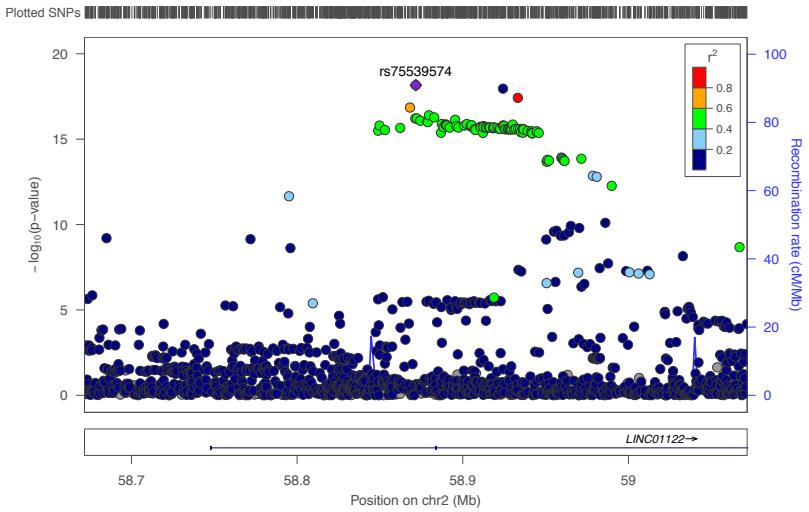
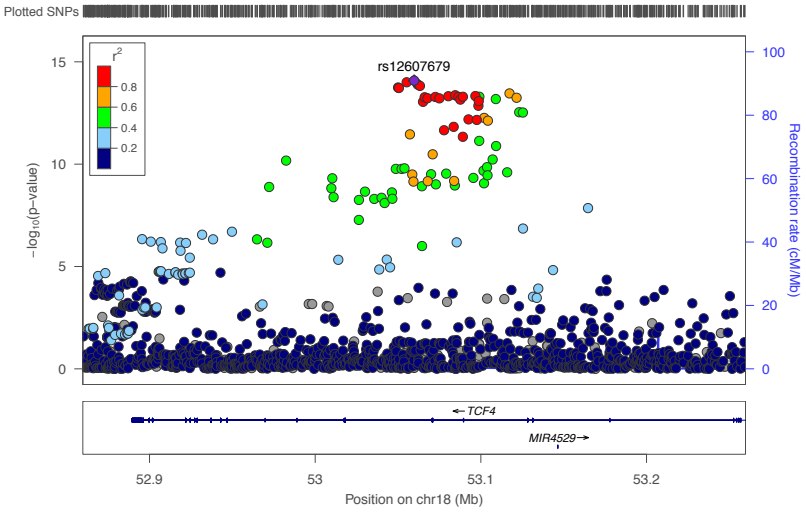
sleepduration_1



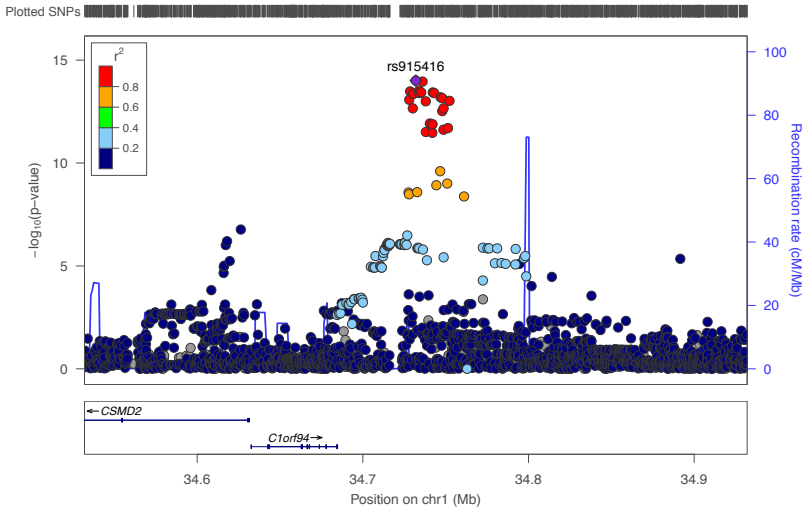
sleepduration_2



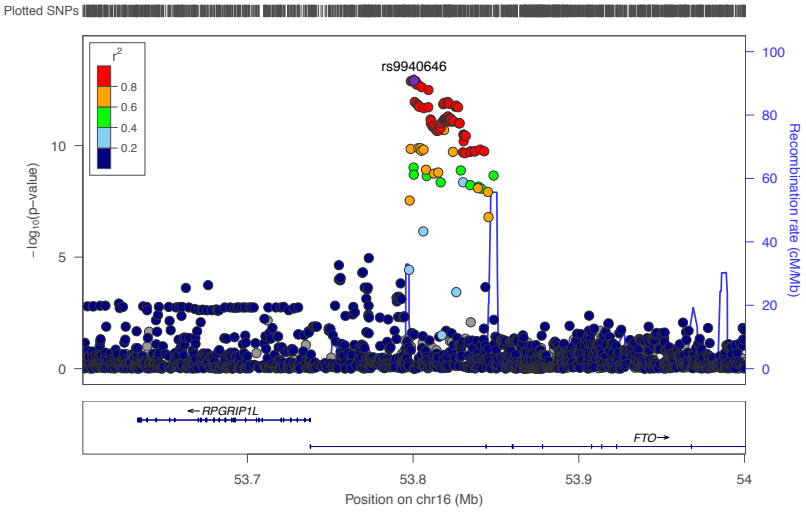
sleepduration_3



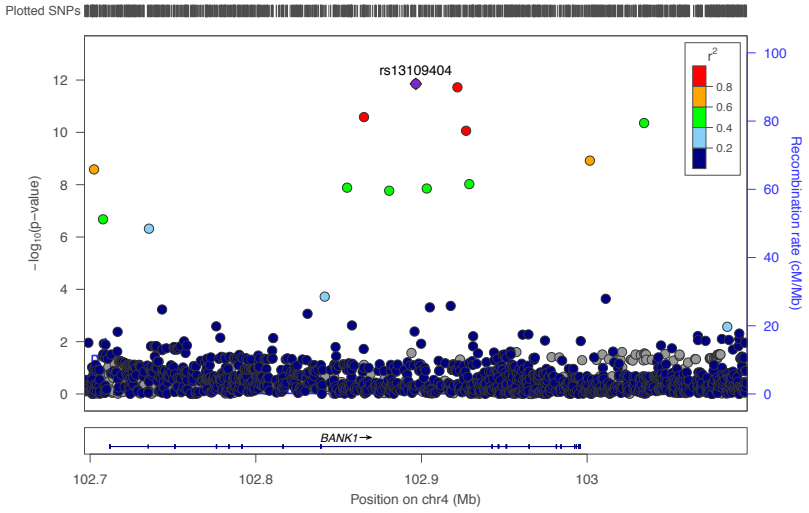
sleepduration_4



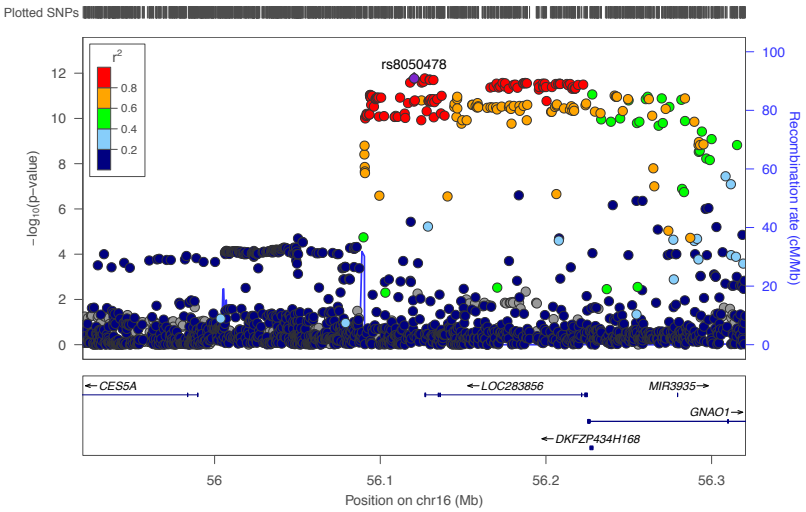
sleepduration_5



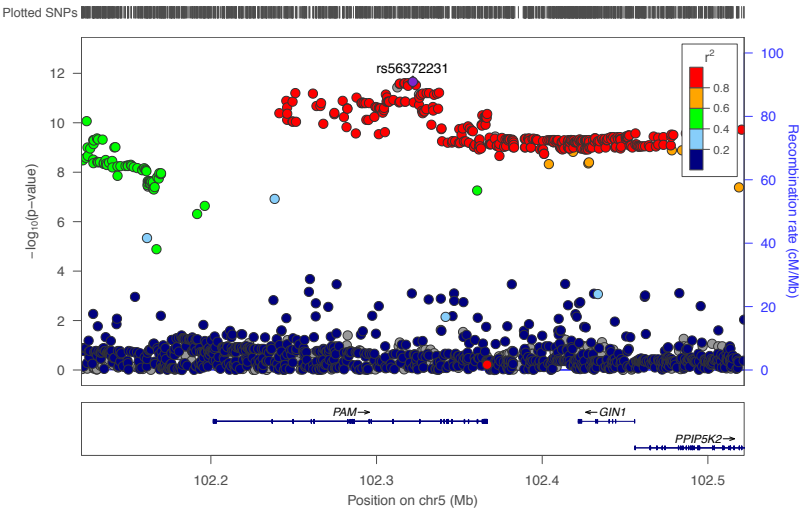
sleepduration_6



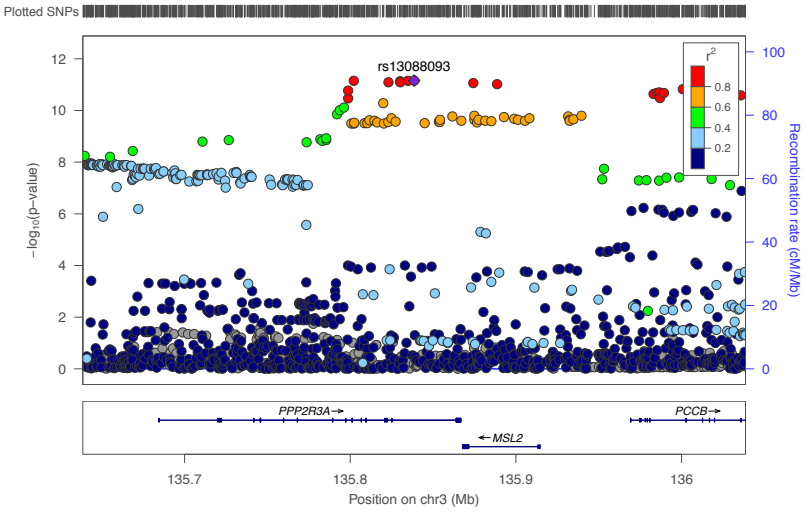
sleepduration_7



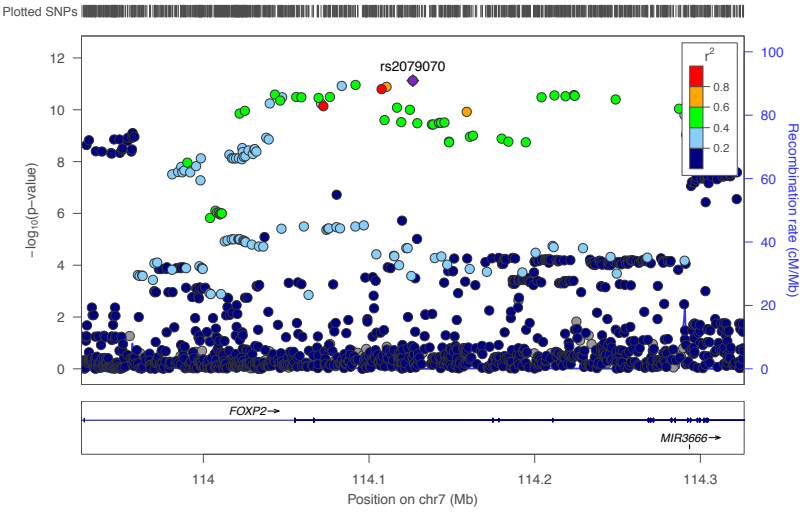
sleepduration_8



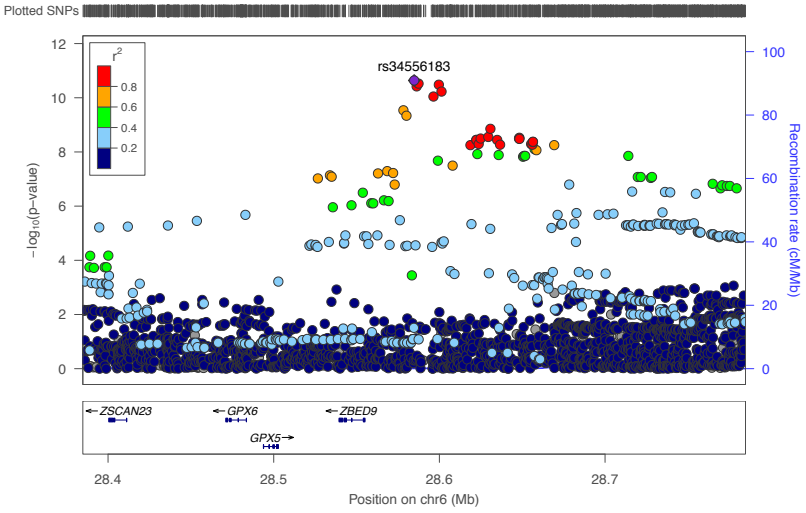
sleepduration_9



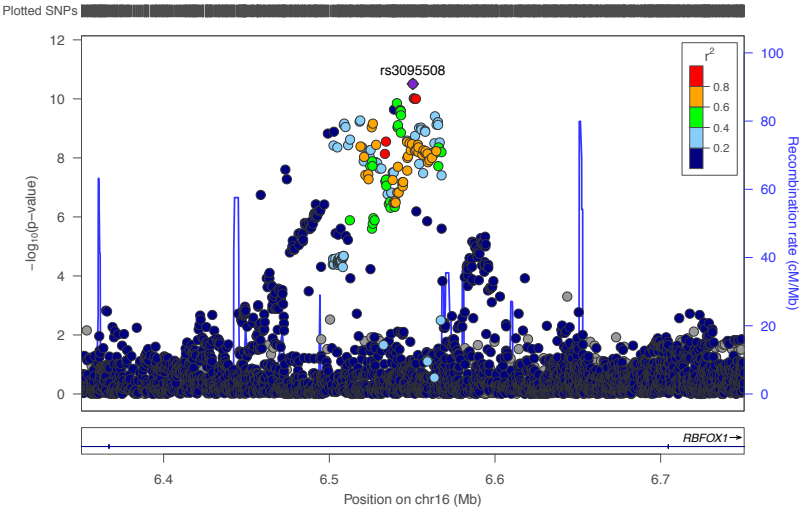
sleepduration_10



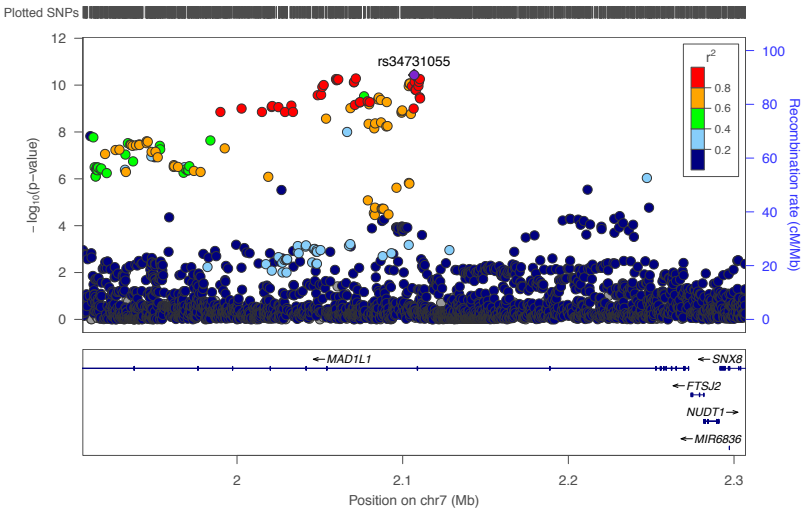
sleepduration_11



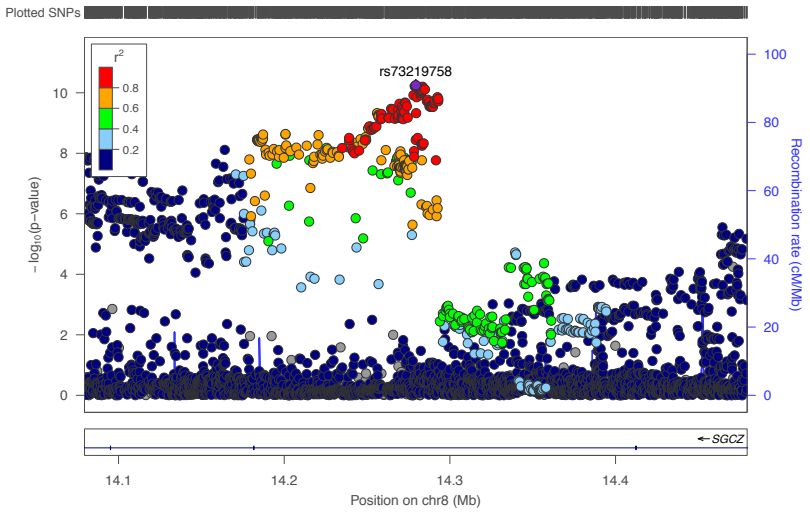
sleepduration_12



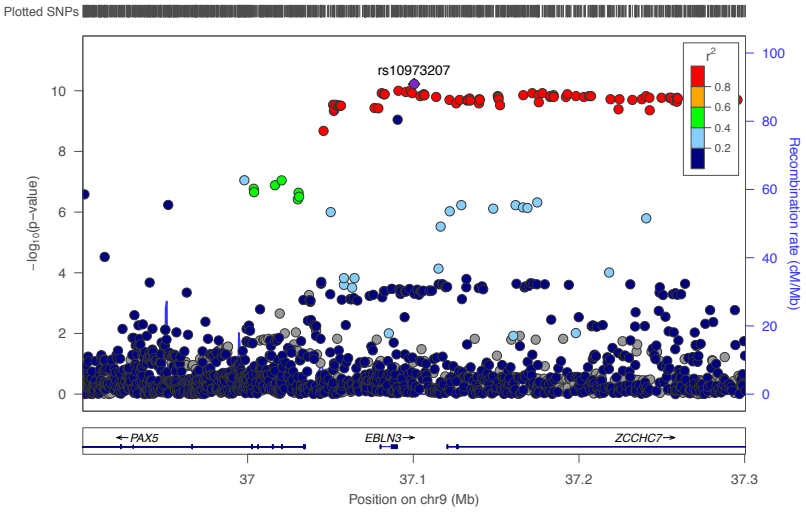
sleepduration_13



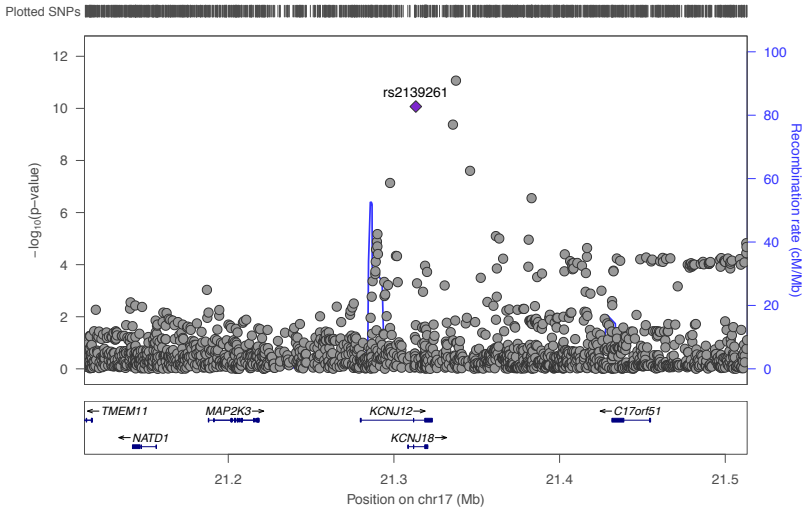
sleepduration_14



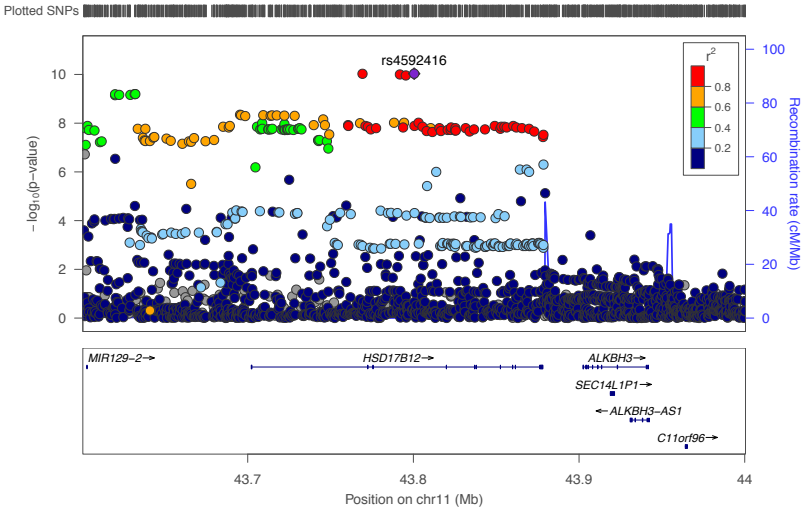
sleepduration_15



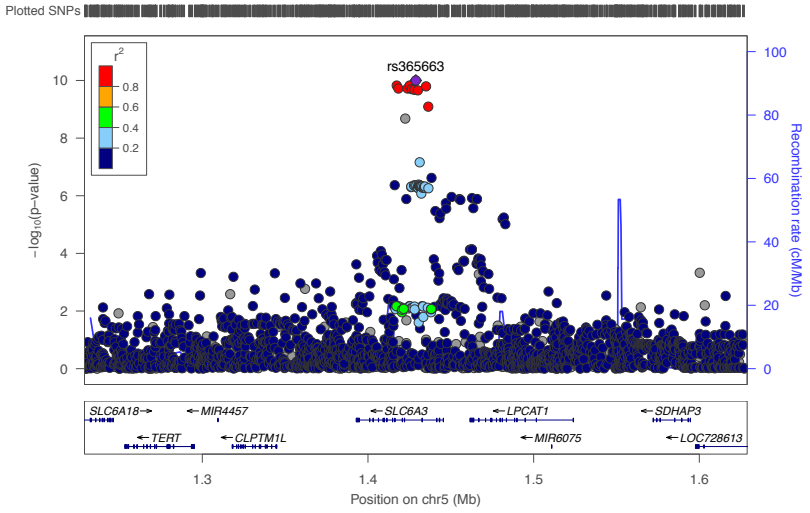
sleepduration_16



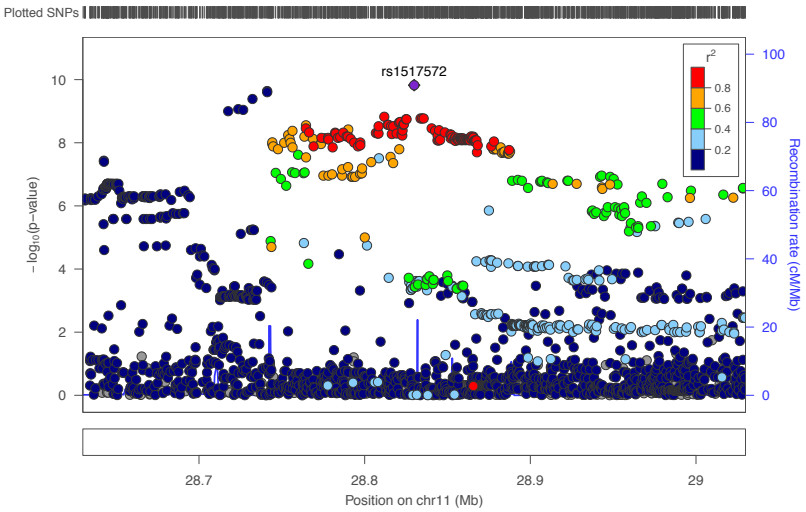
sleepduration_17



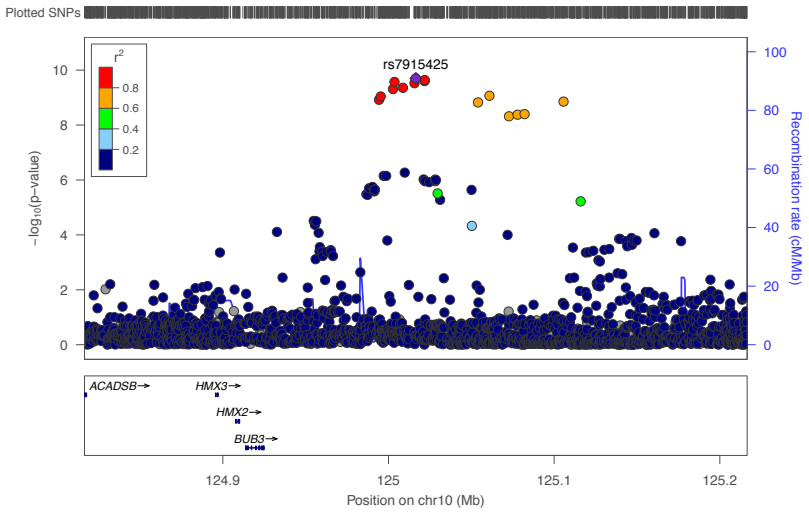
sleepduration_18



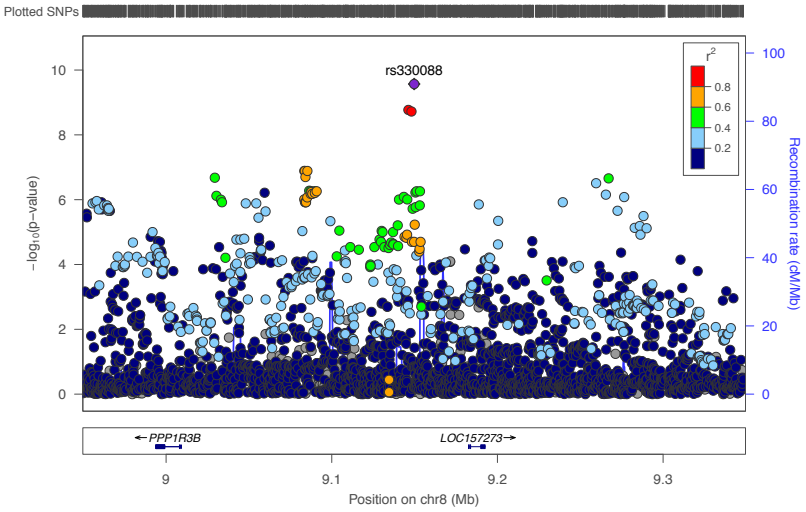
sleepduration_19



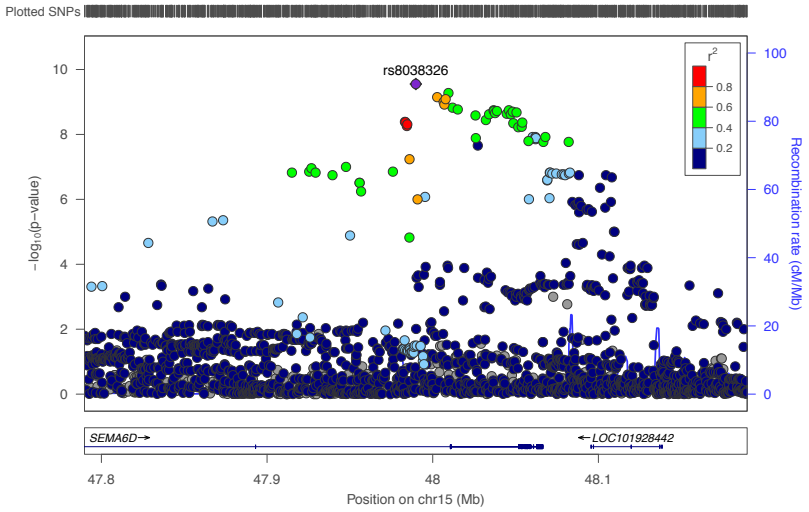
sleepduration_20



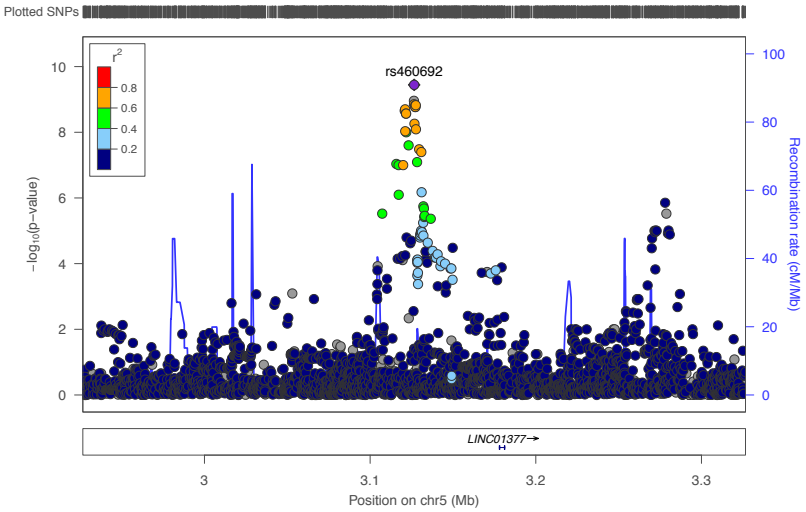
sleepduration_21



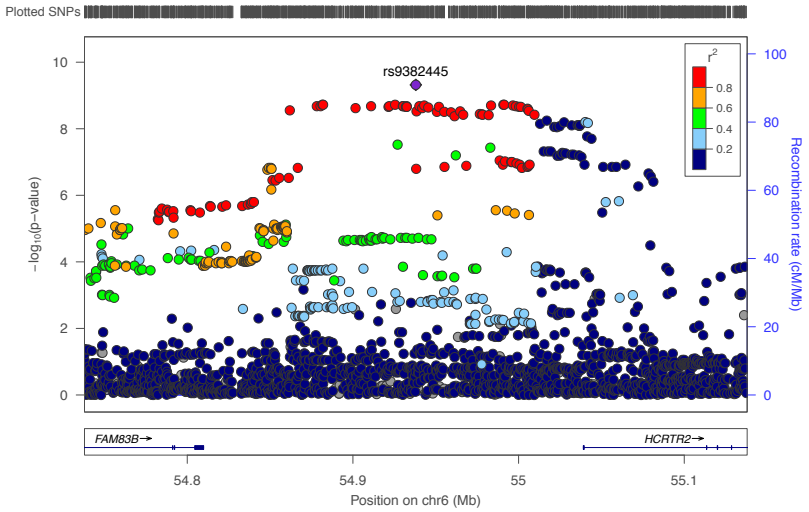
sleepduration_22



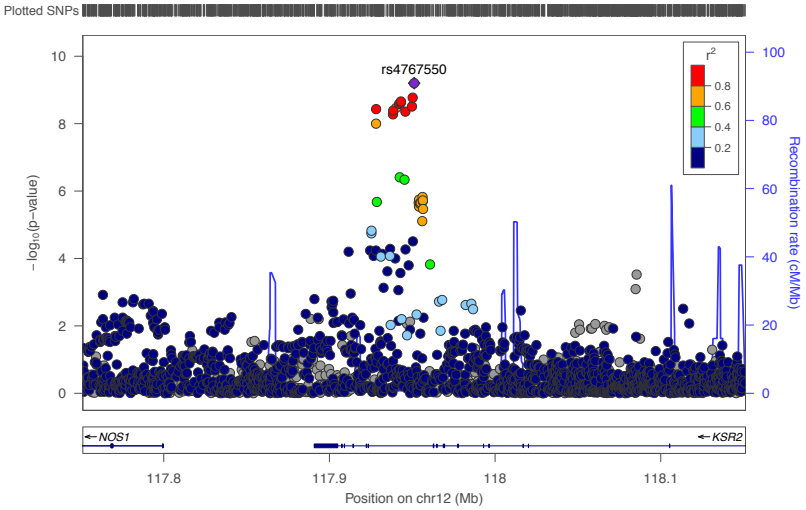
sleepduration_23



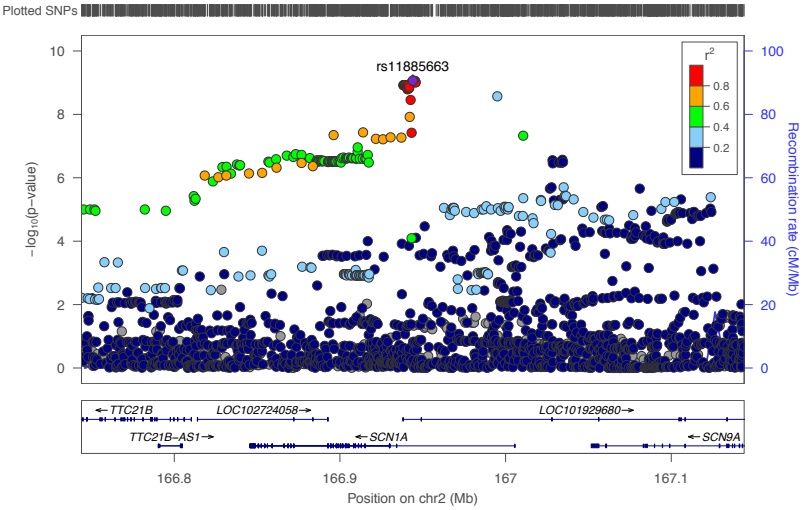
sleepduration_24



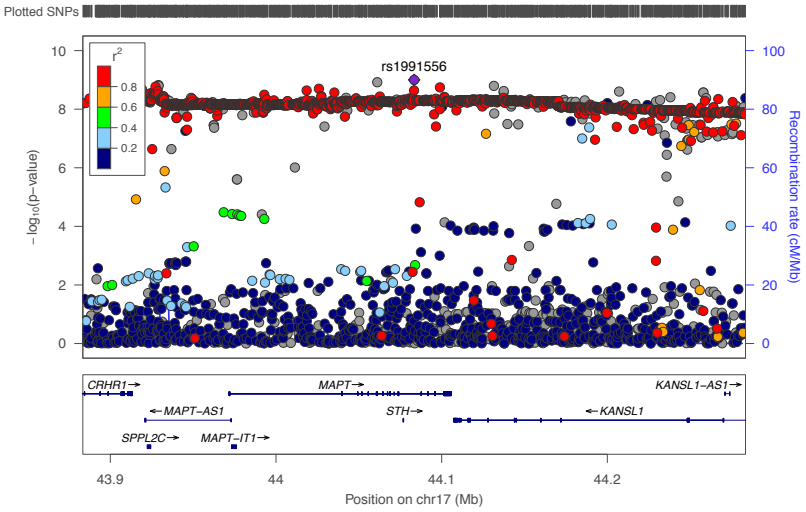
sleepduration_25



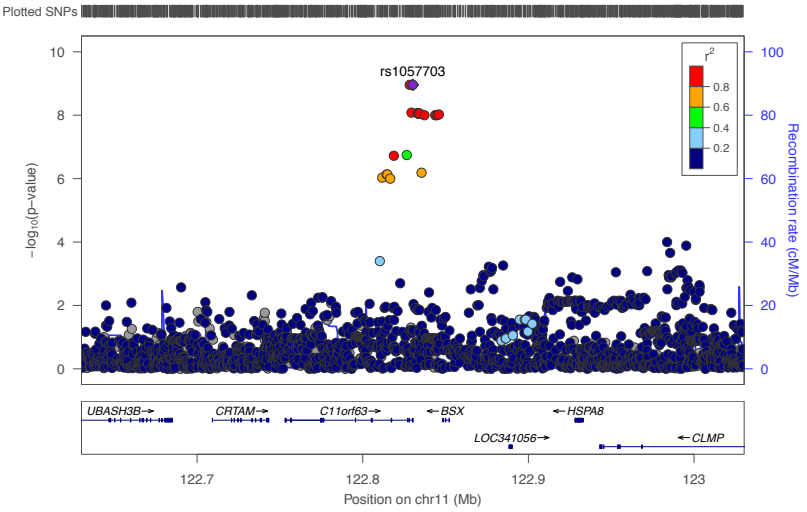
sleepduration_26



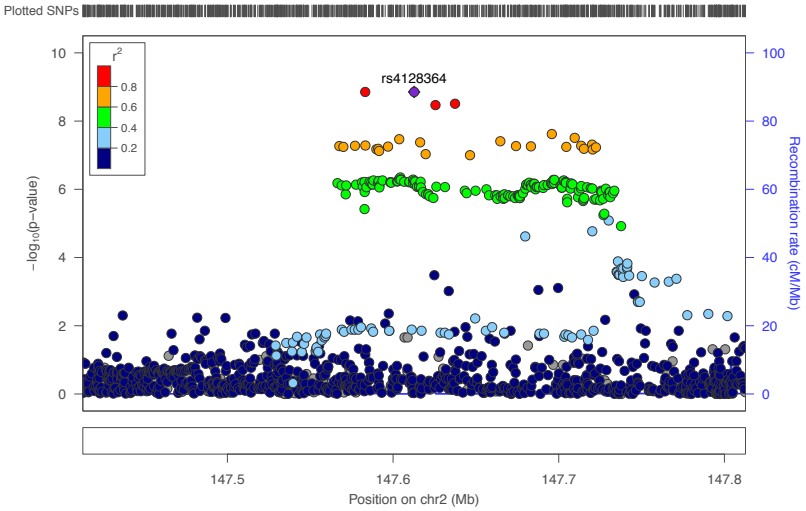
sleepduration_27



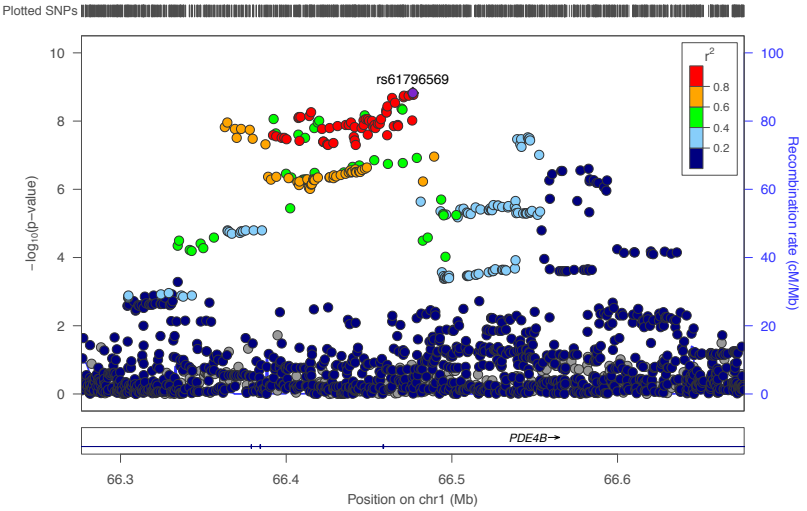
sleepduration_28



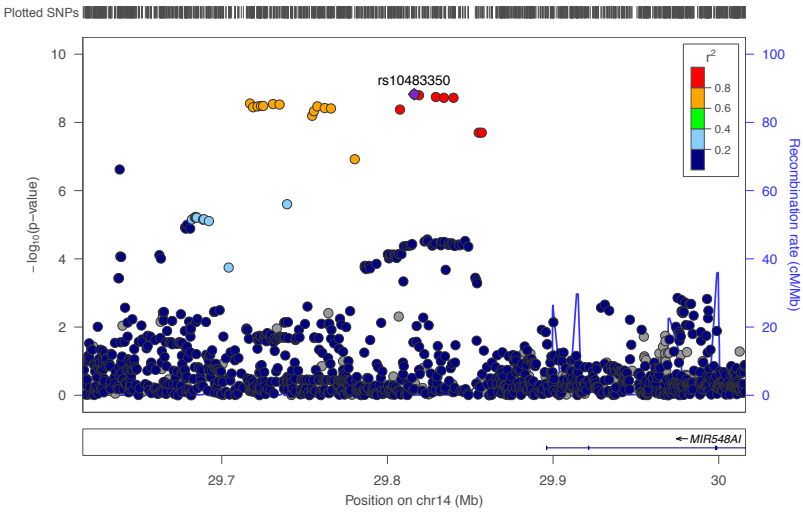
sleepduration_29



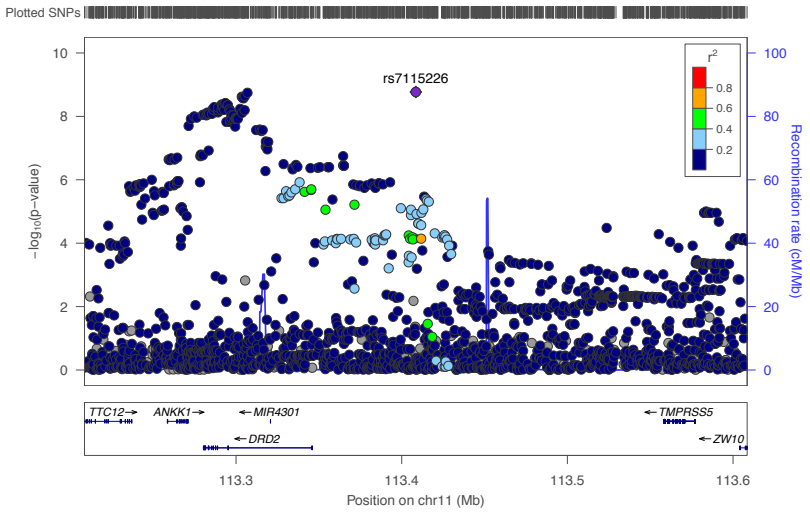
sleepduration_30



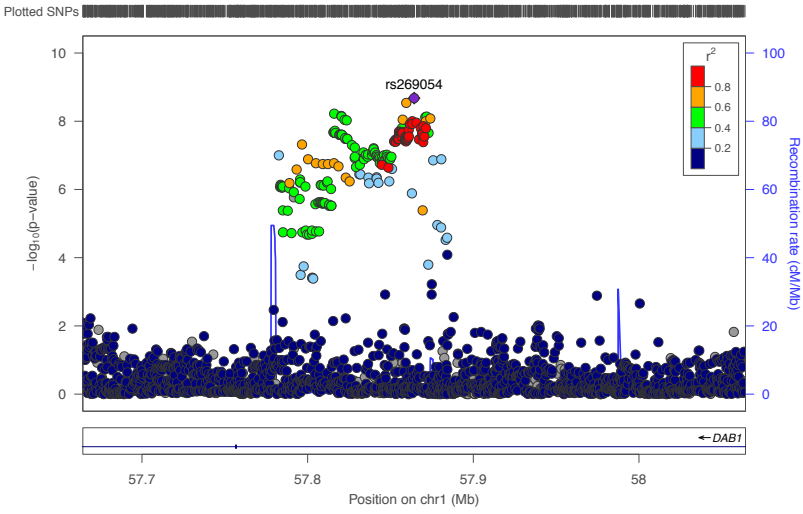
sleepduration_31



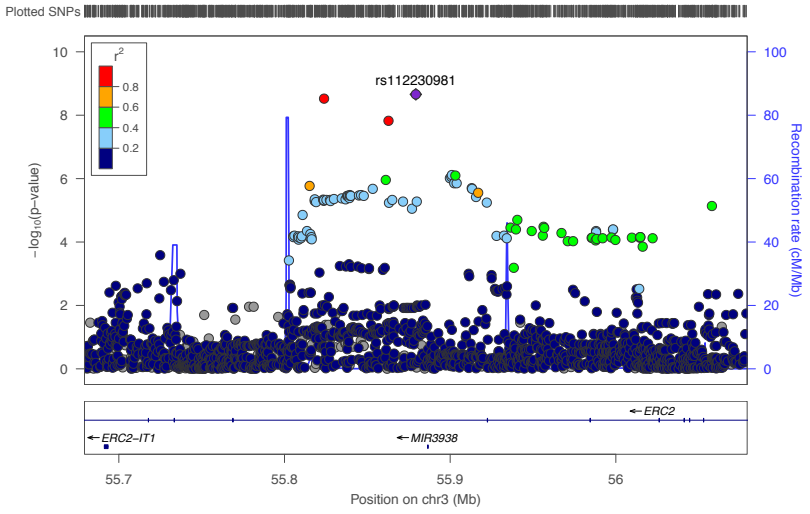
sleepduration_32



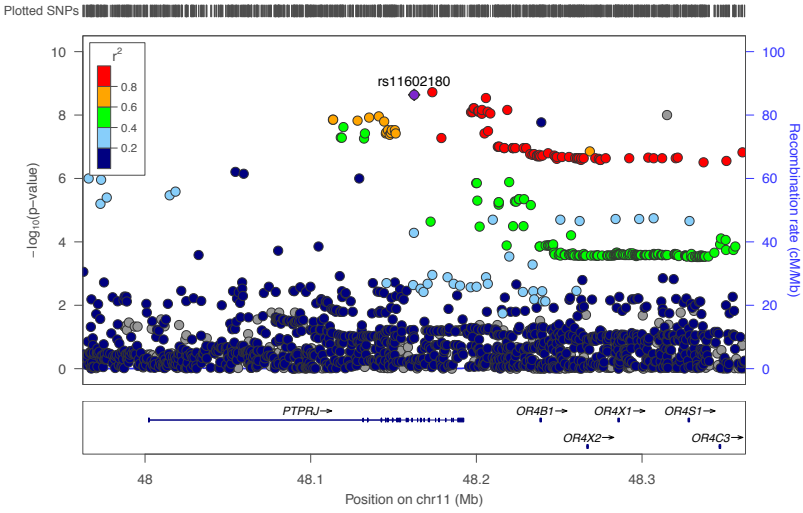
sleepduration_33



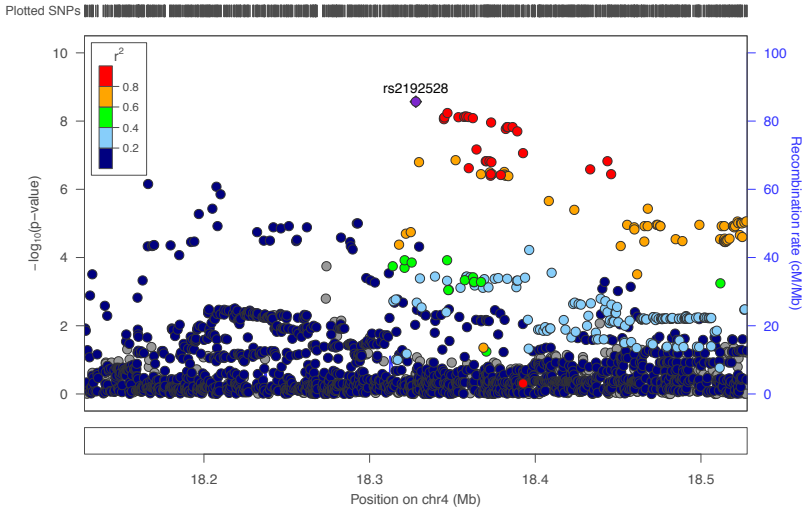
sleepduration_34



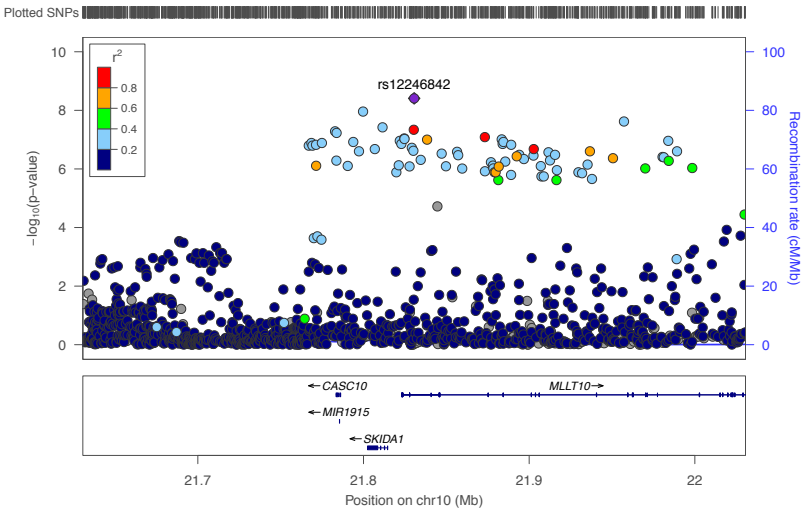
sleepduration_35



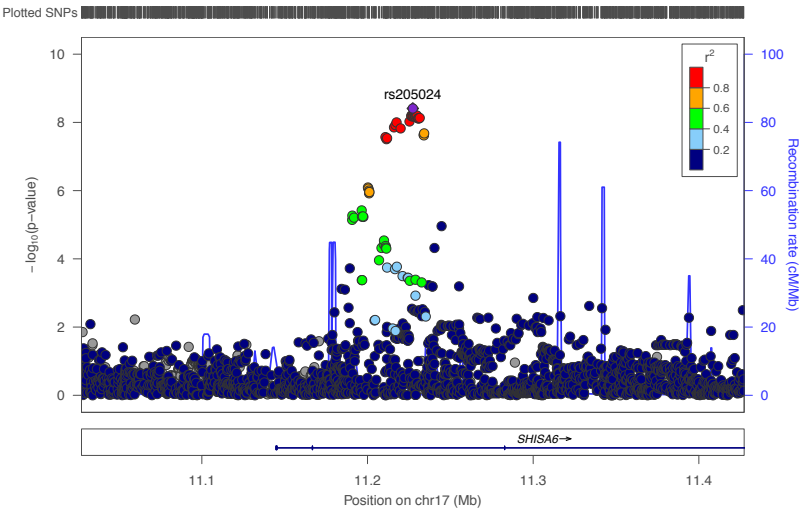
sleepduration_36



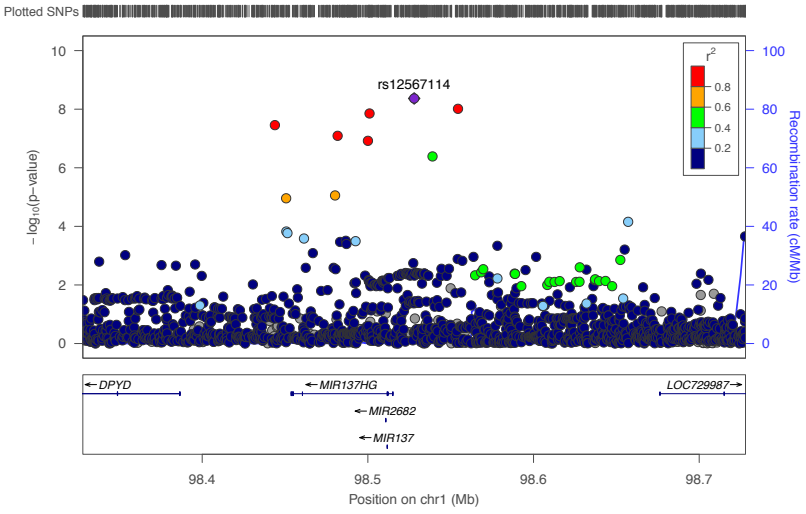
sleepduration_37



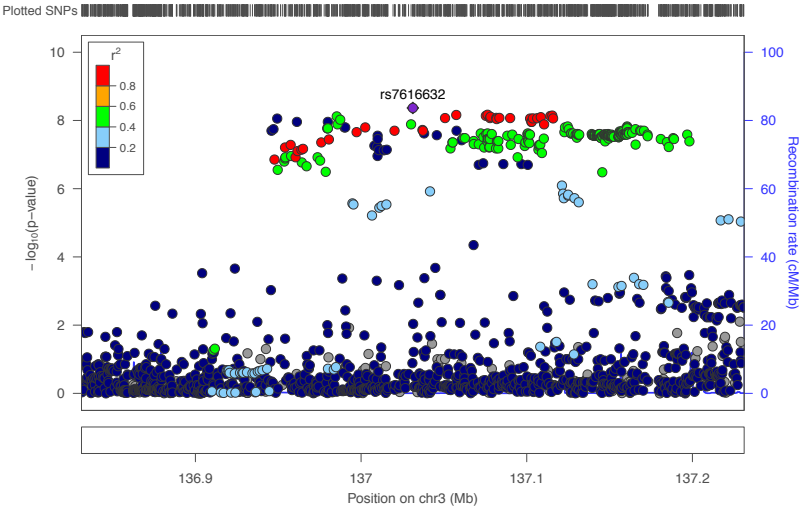
sleepduration_38



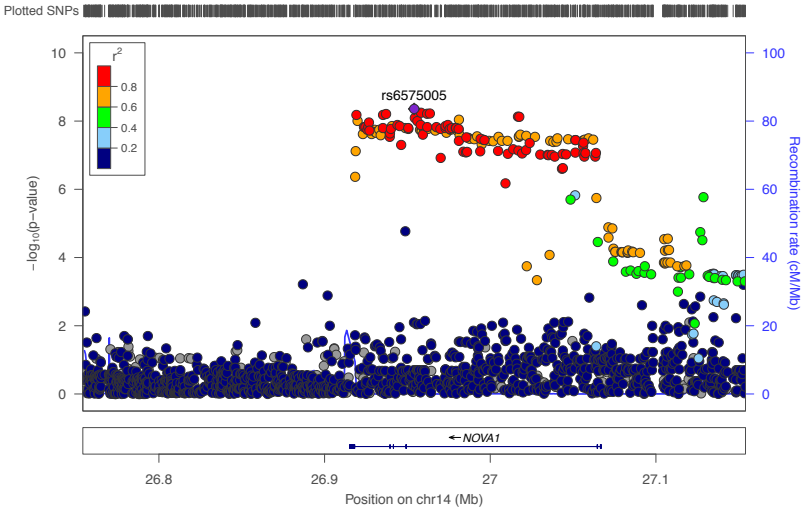
sleepduration_39



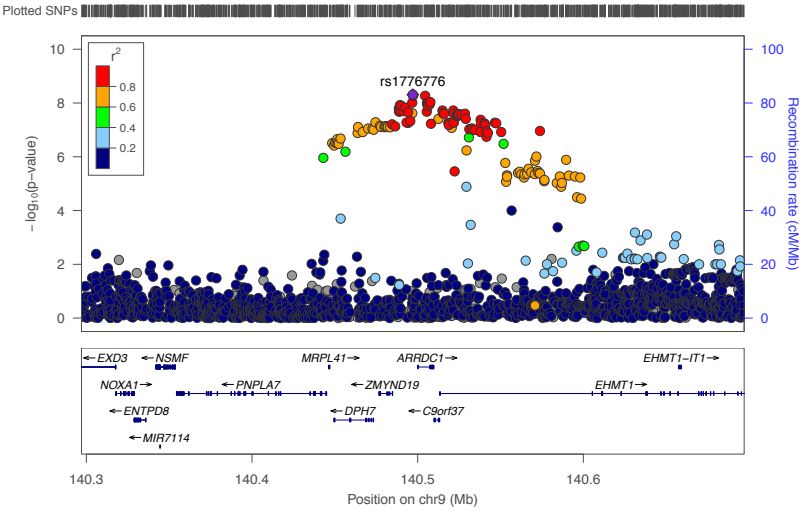
sleepduration_40



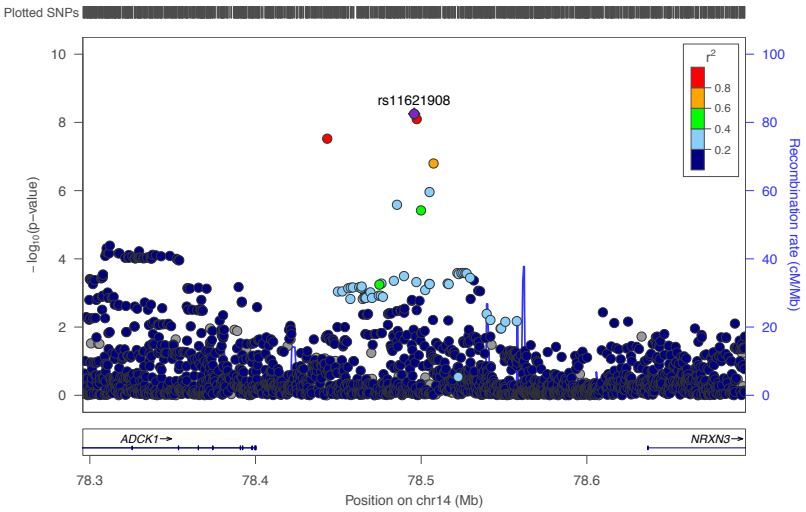
sleepduration_41



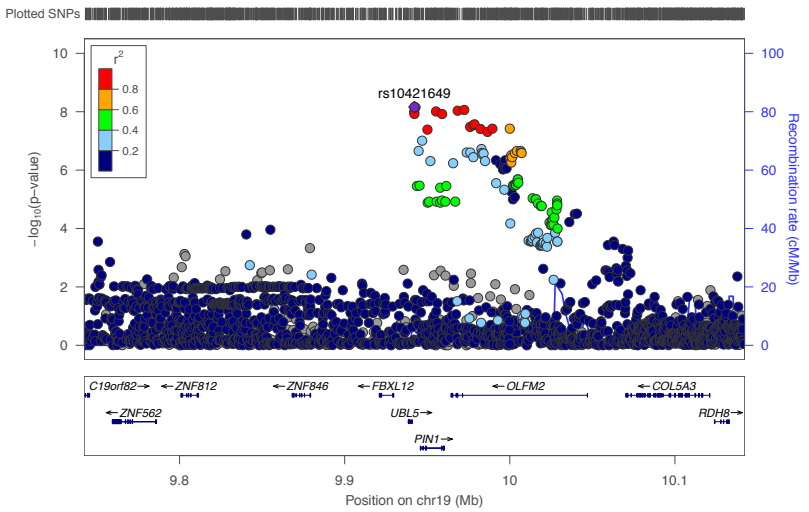
sleepduration_42



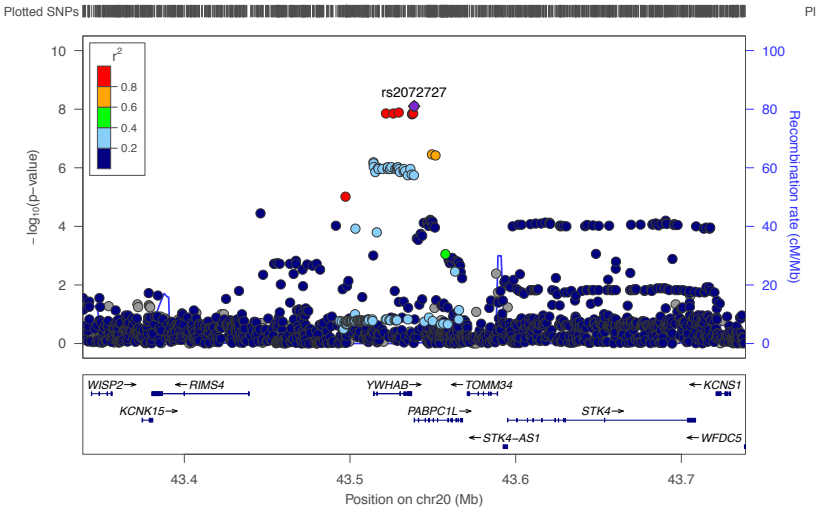
sleepduration_43



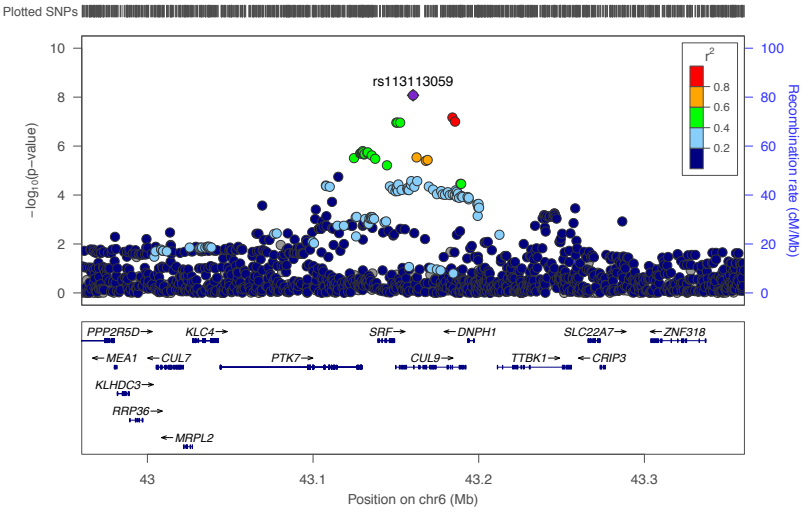
sleepduration_44



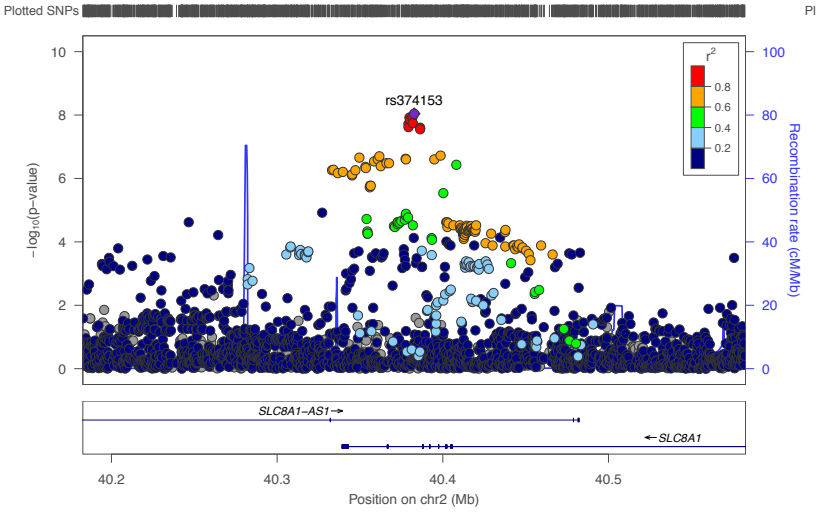
sleepduration_45



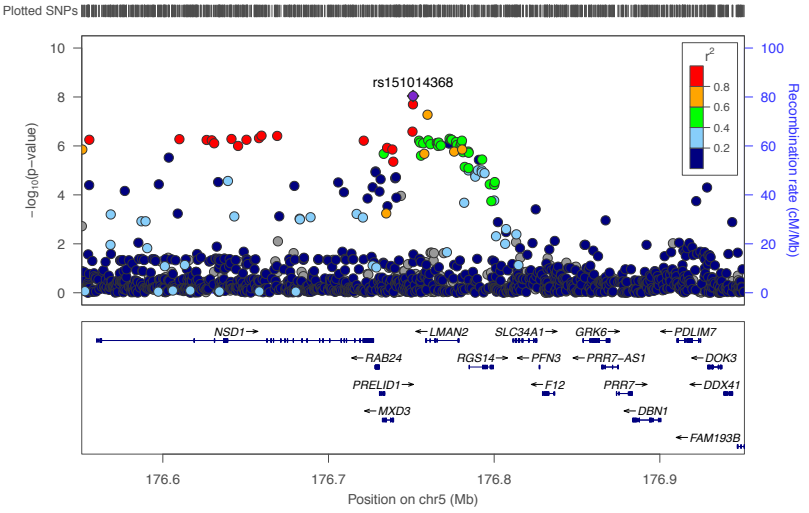
sleepduration_46



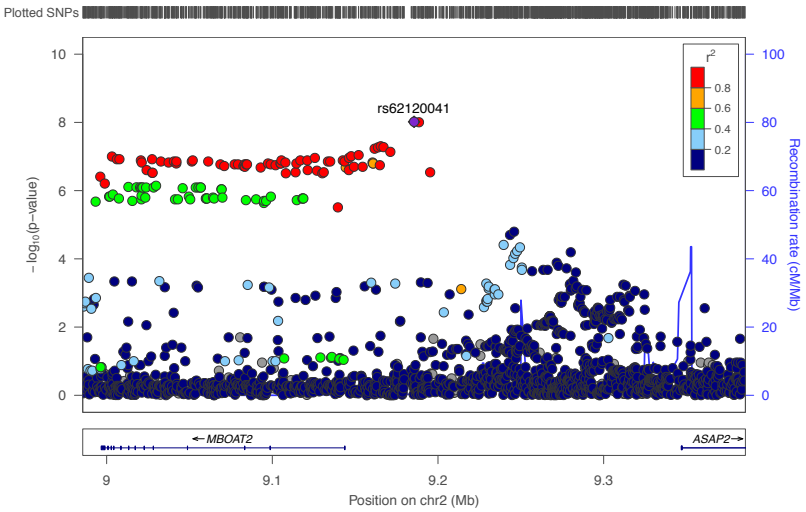
sleepduration_47



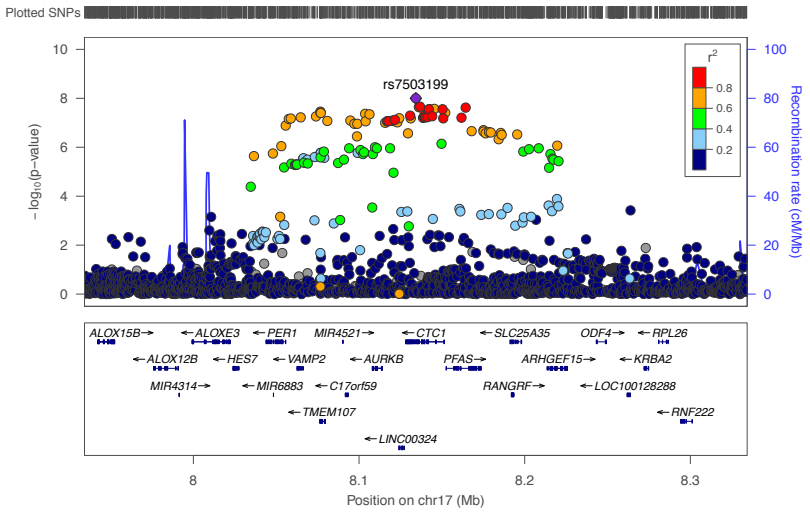
sleepduration_48



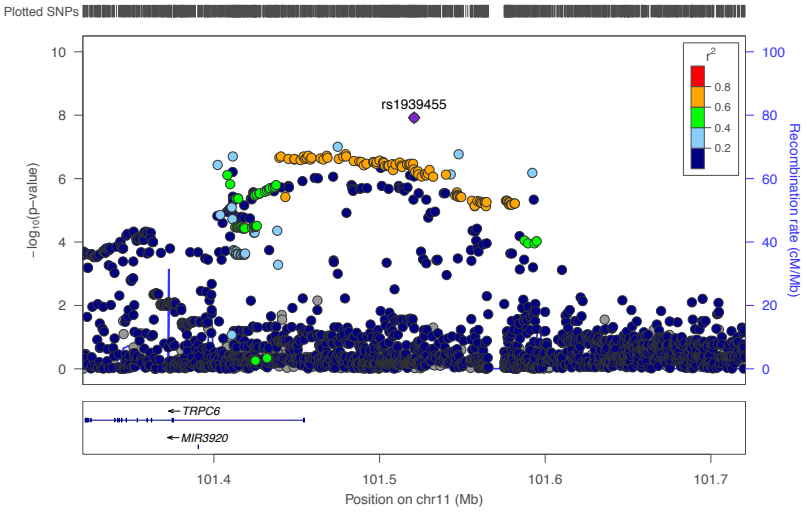
sleepduration_49



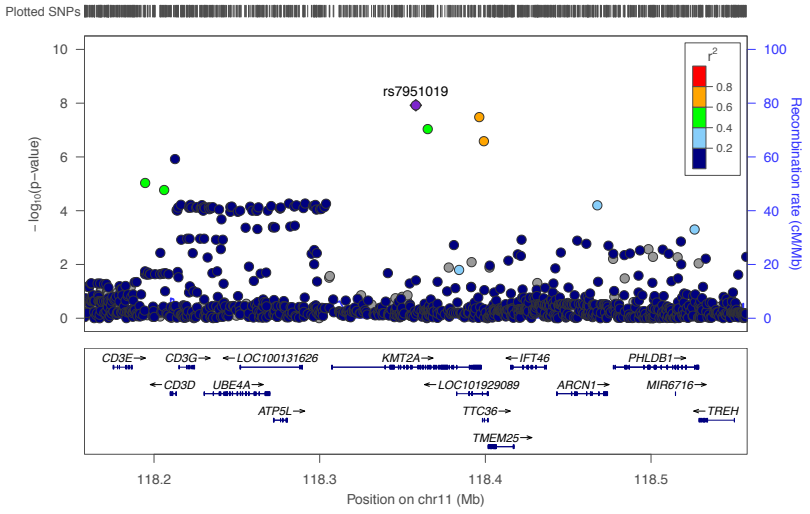
sleepduration_50



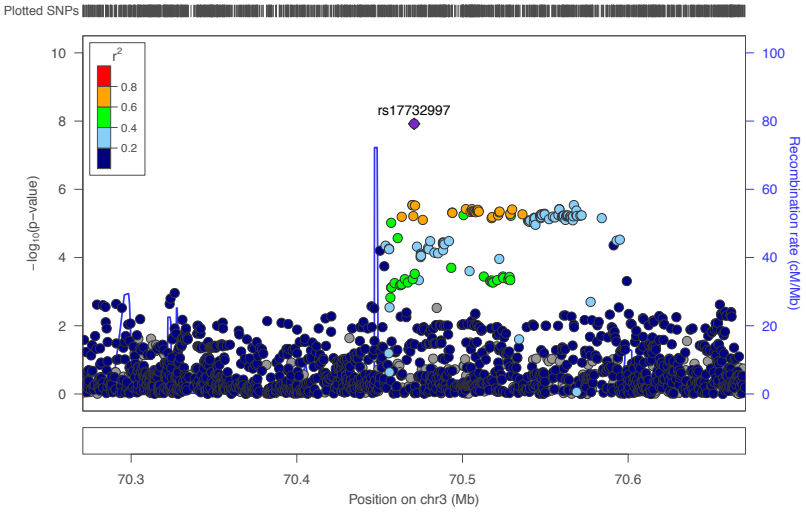
sleepduration_51



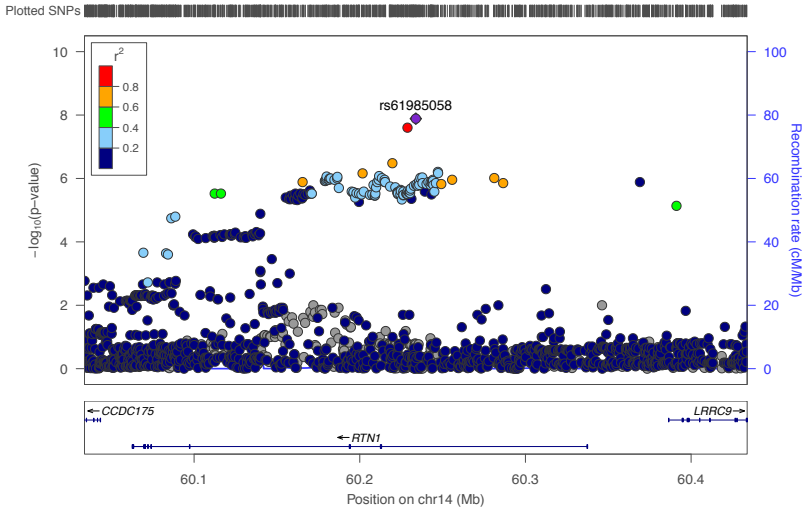
sleepduration_52



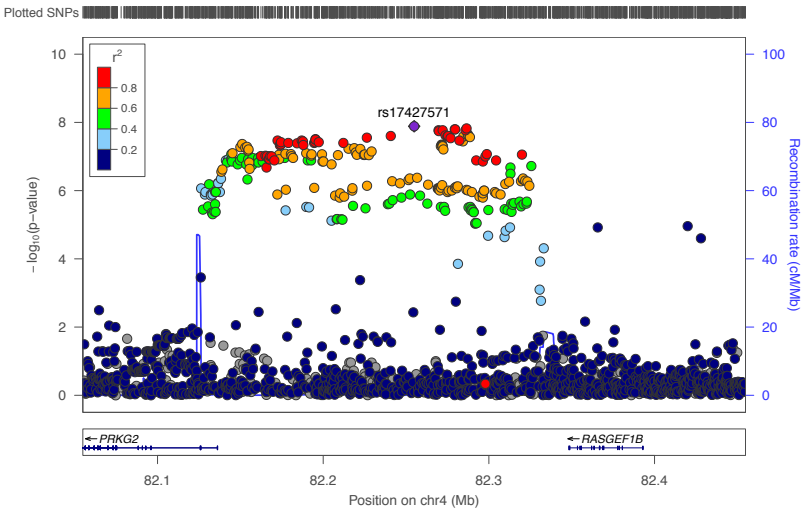
sleepduration_53



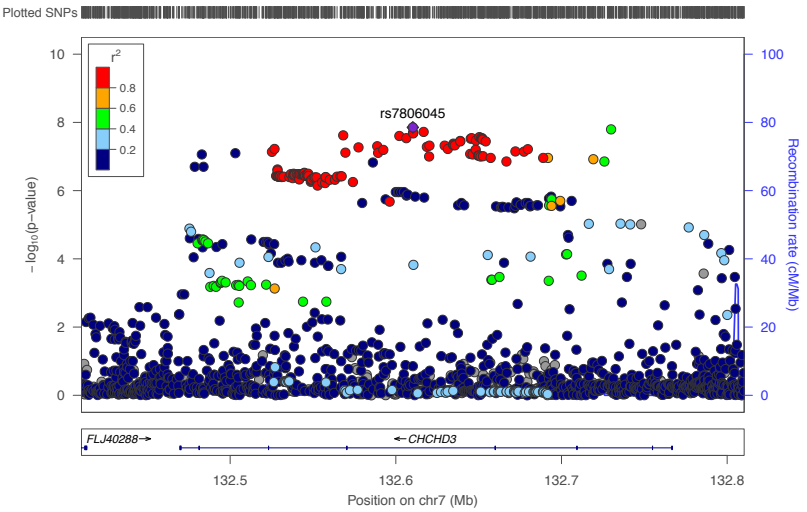
sleepduration_54



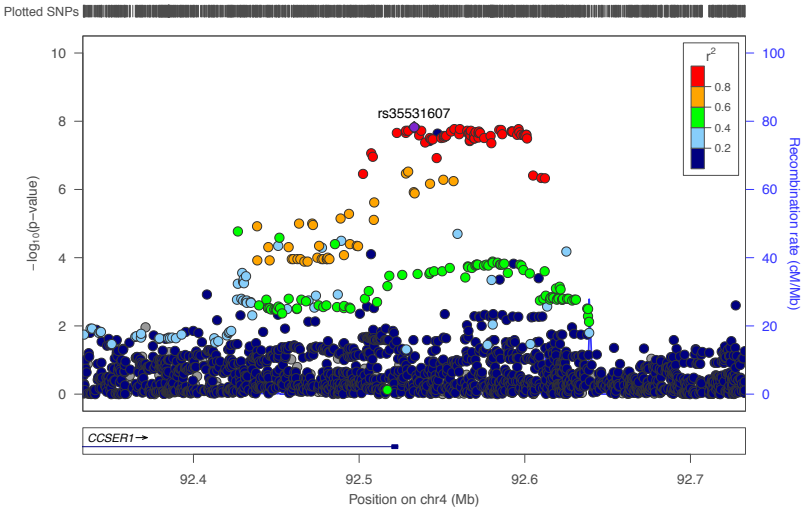
sleepduration_55



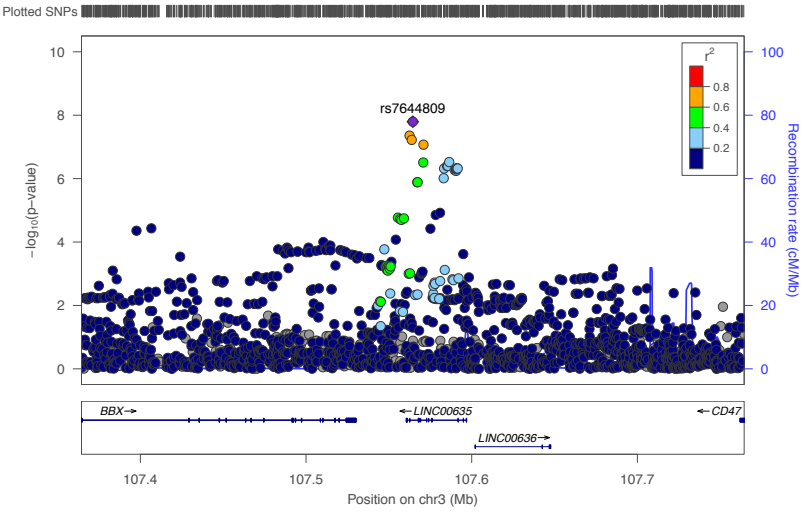
sleepduration_56



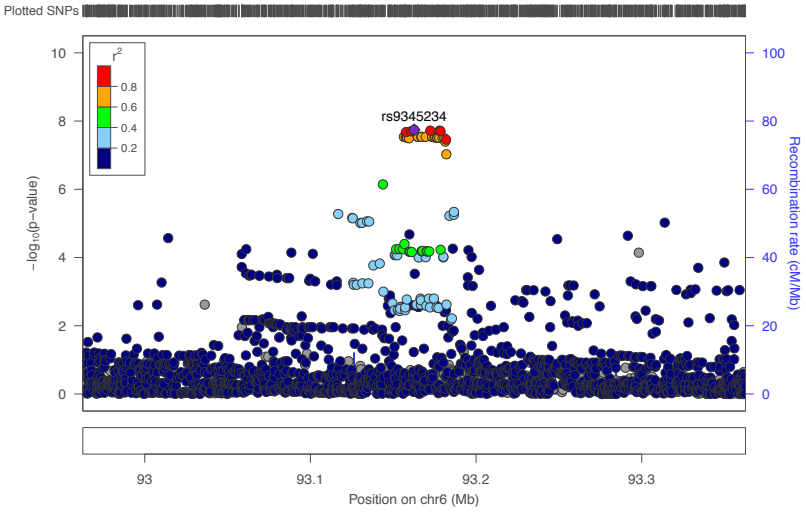
sleepduration_57



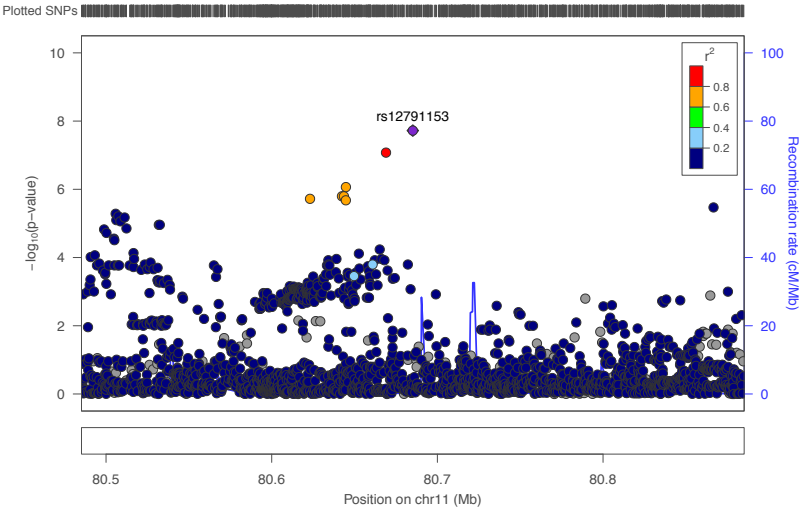
sleepduration_58



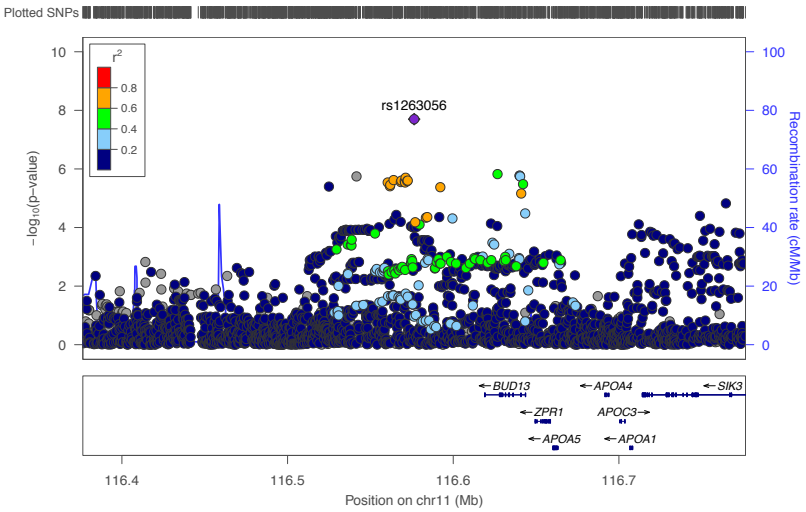
sleepduration_59



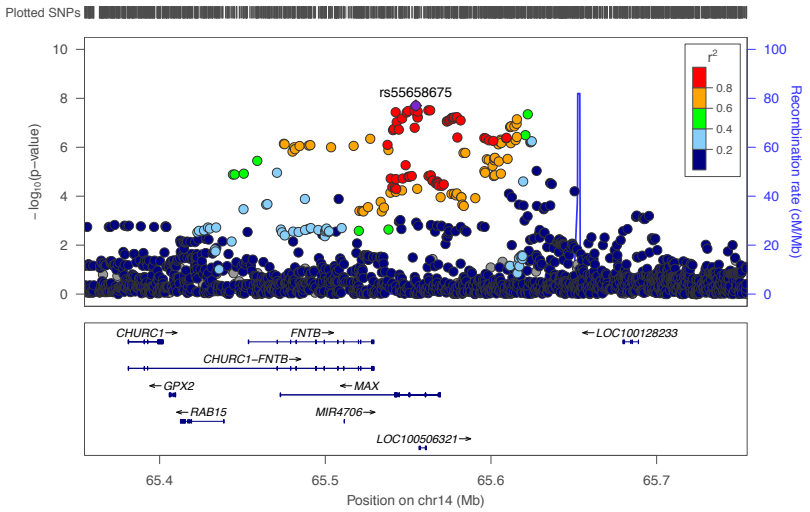
sleepduration_60



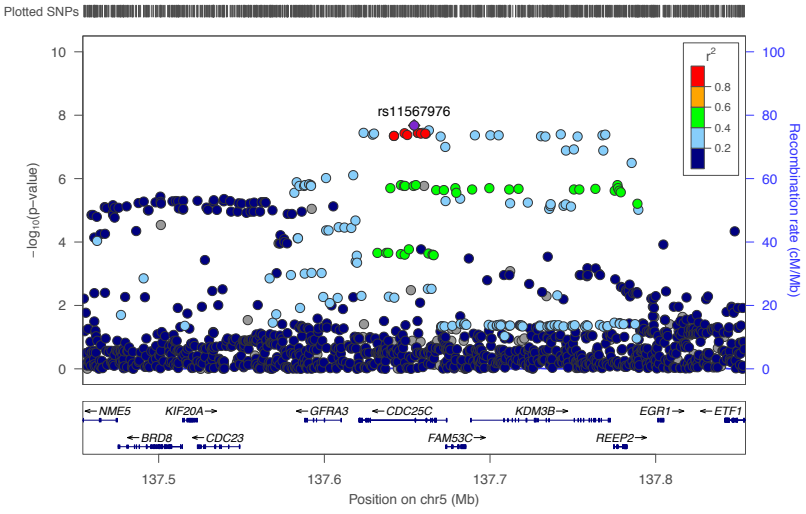
sleepduration_61



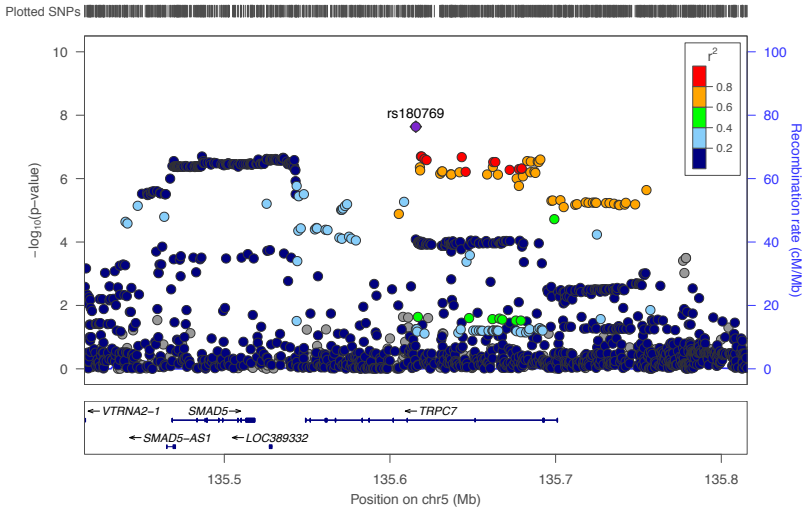
sleepduration_62



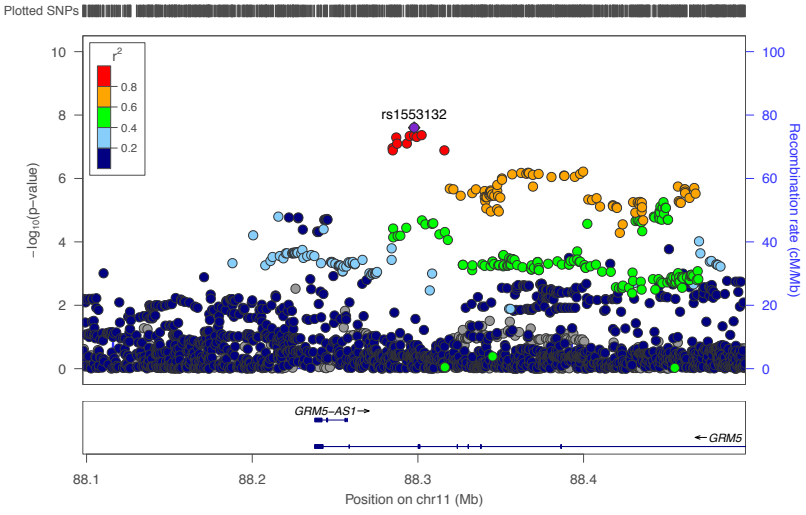
sleepduration_63



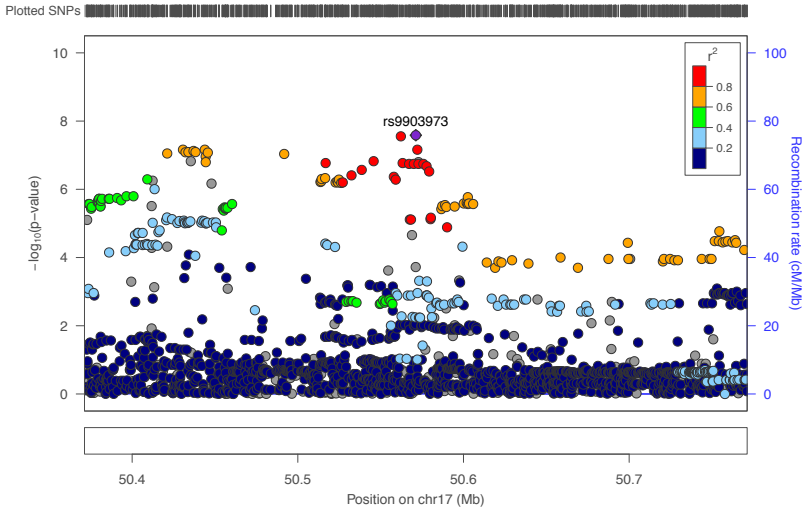
sleepduration_64



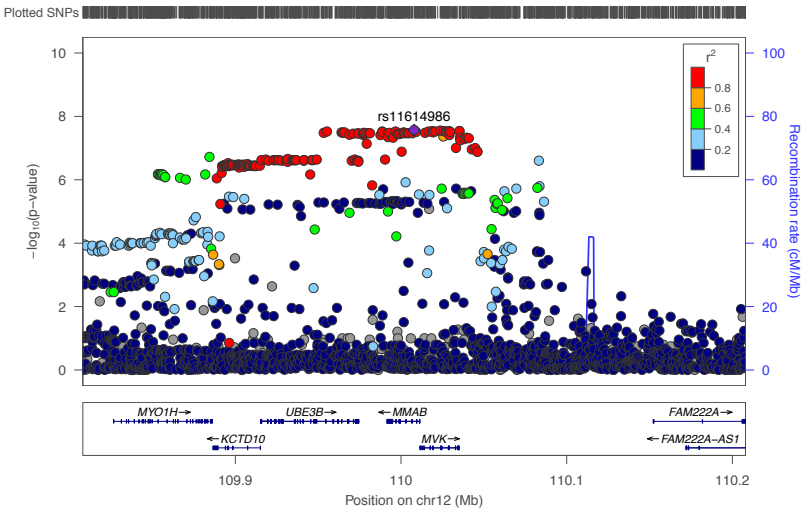
sleepduration_65



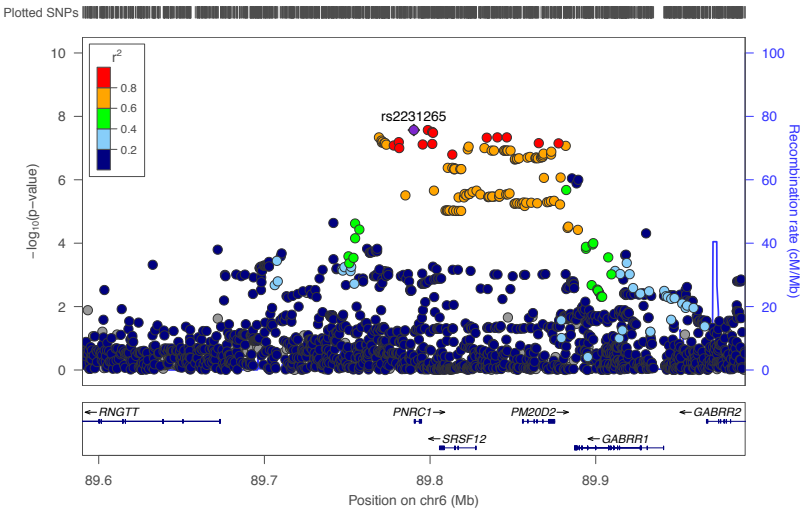
sleepduration_66



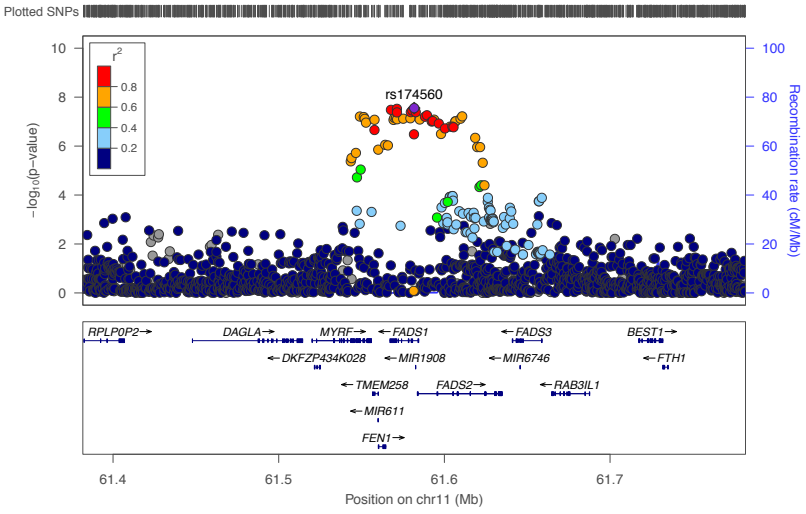
sleepduration_67



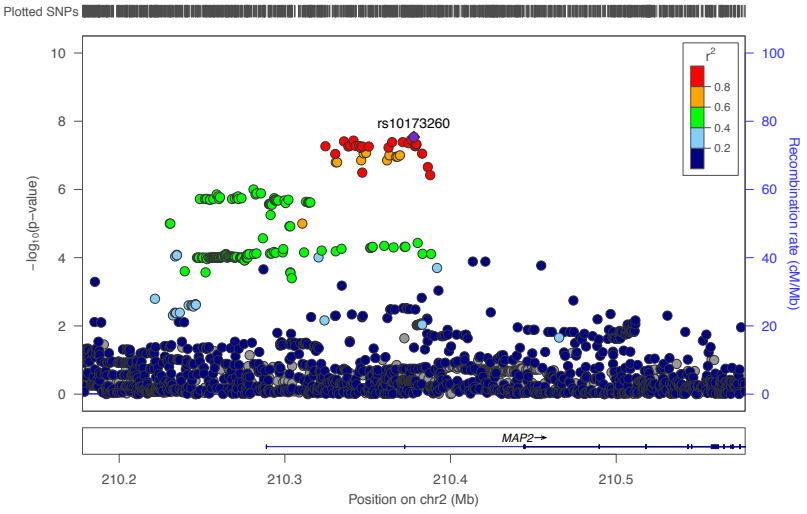
sleepduration_68



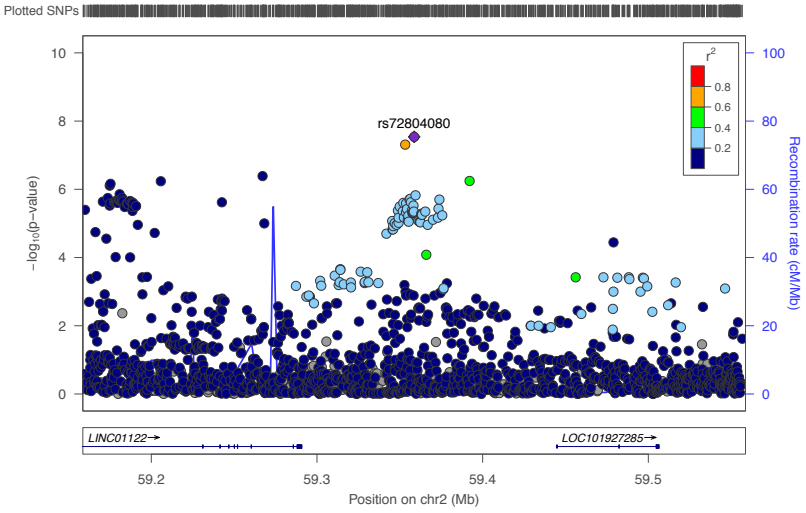
sleepduration_69



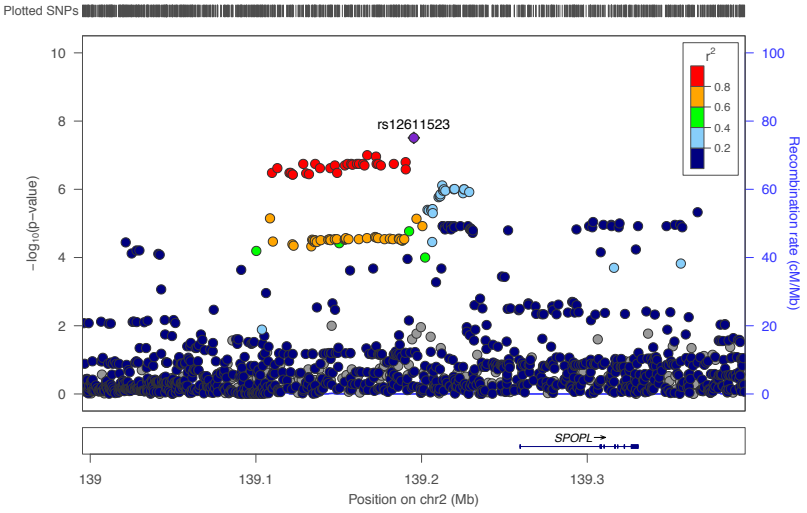
sleepduration_70



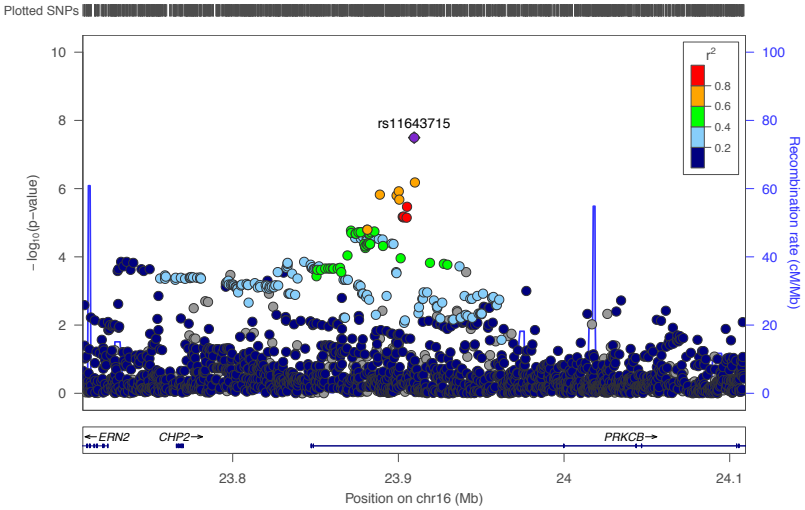
sleepduration_71



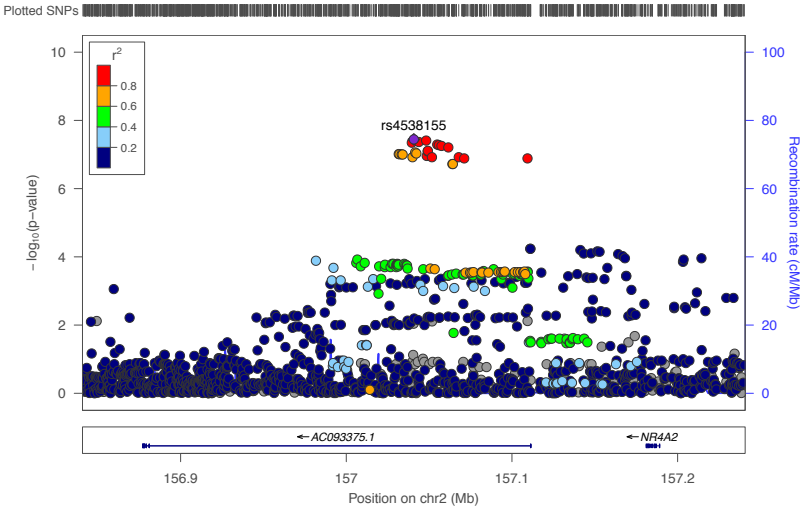
sleepduration_72



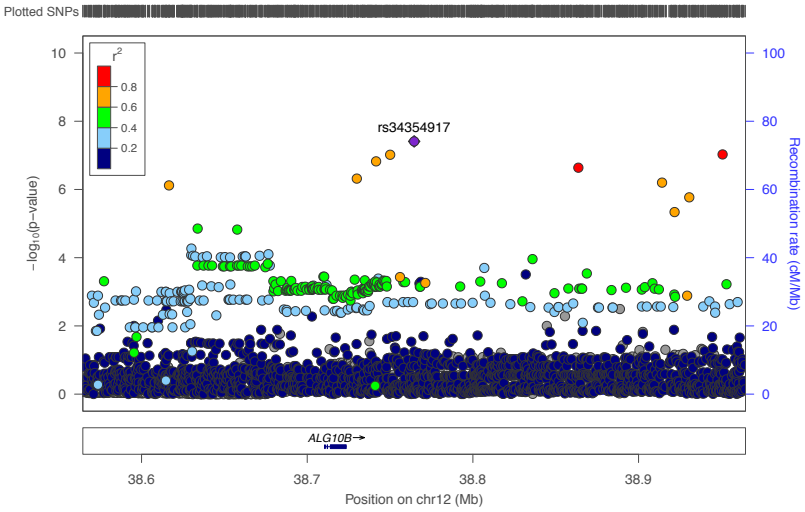
sleepduration_73



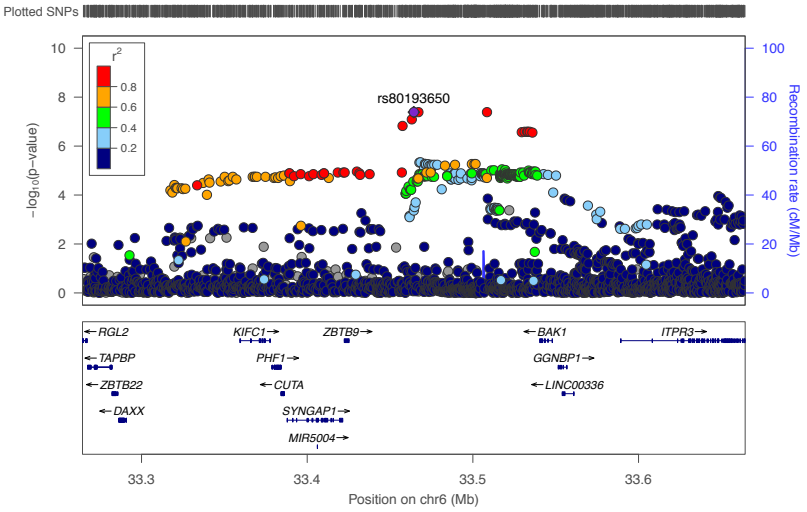
sleepduration_74



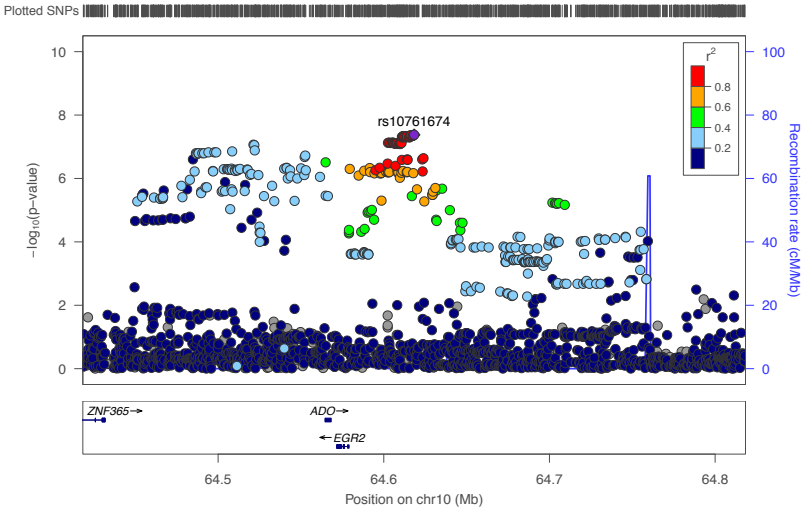
sleepduration_75



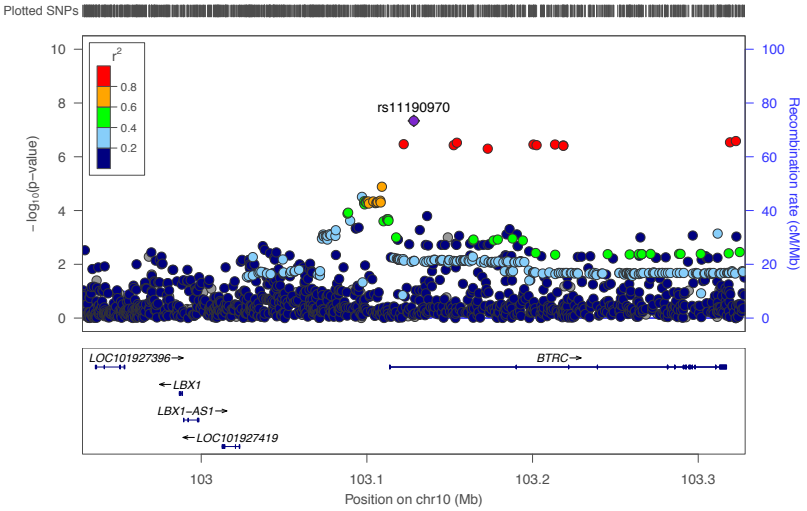
sleepduration_76



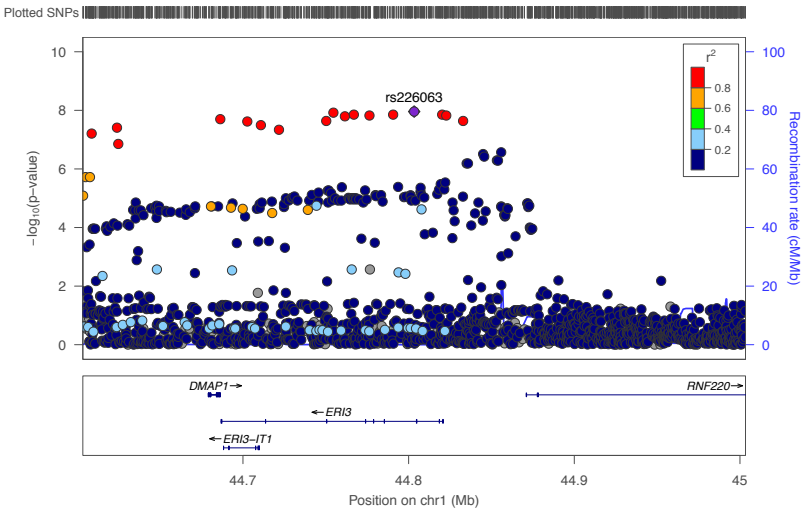
sleepduration_77



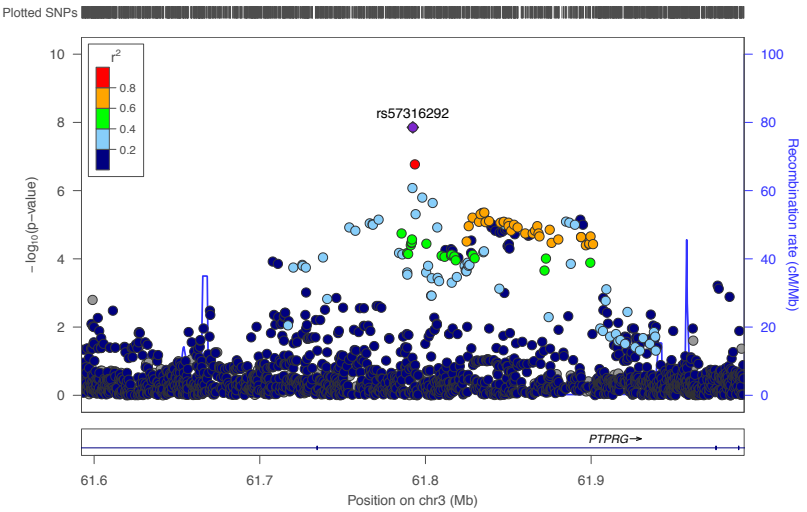
sleepduration_78



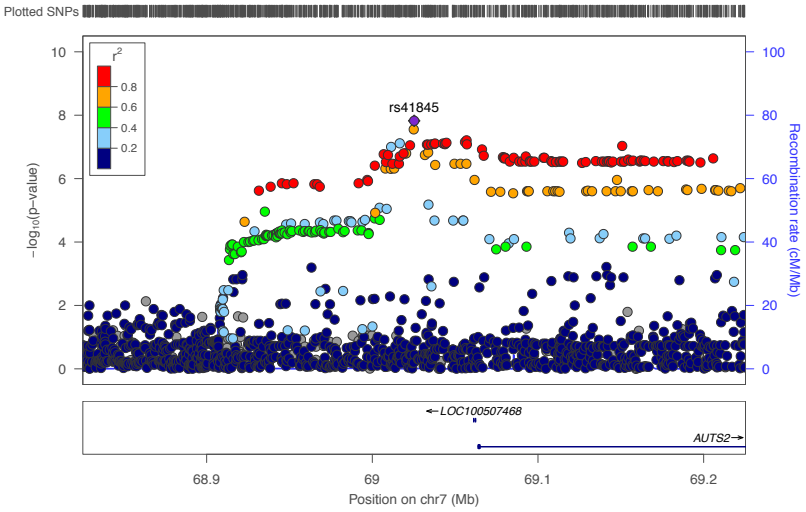
sleep_m2_1



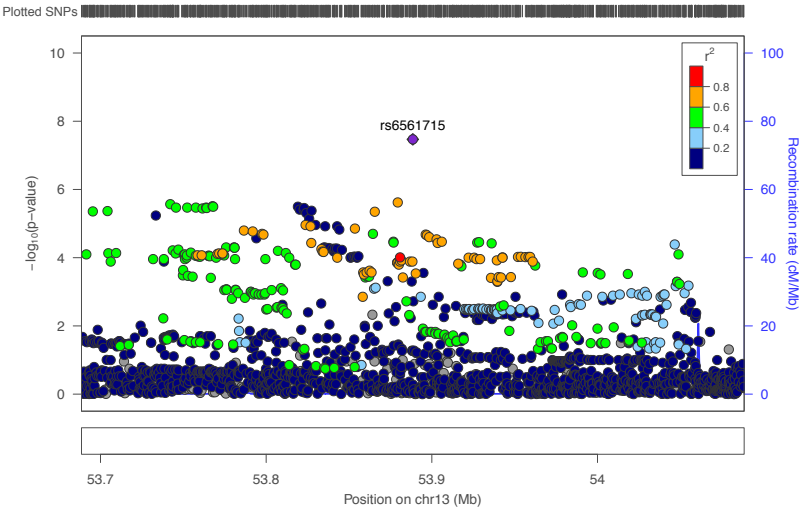
sleep_m2_2



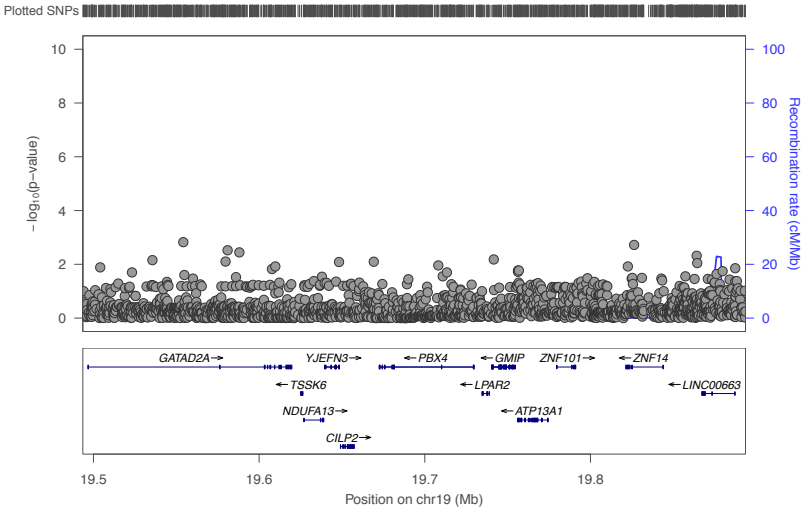
sleep_m2_3



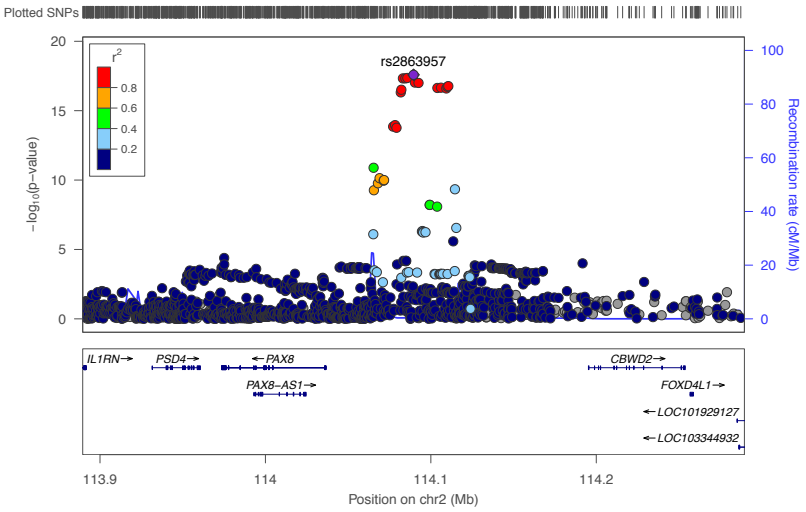
sleep_m2_4



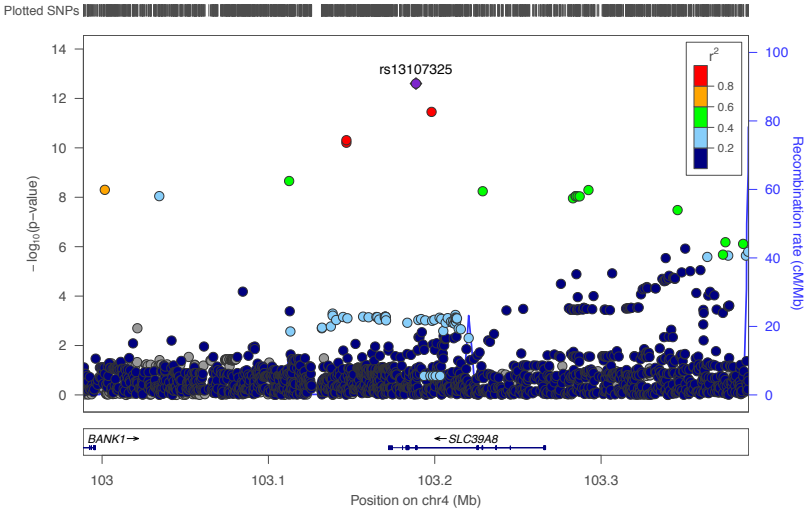
sleep_m2_5



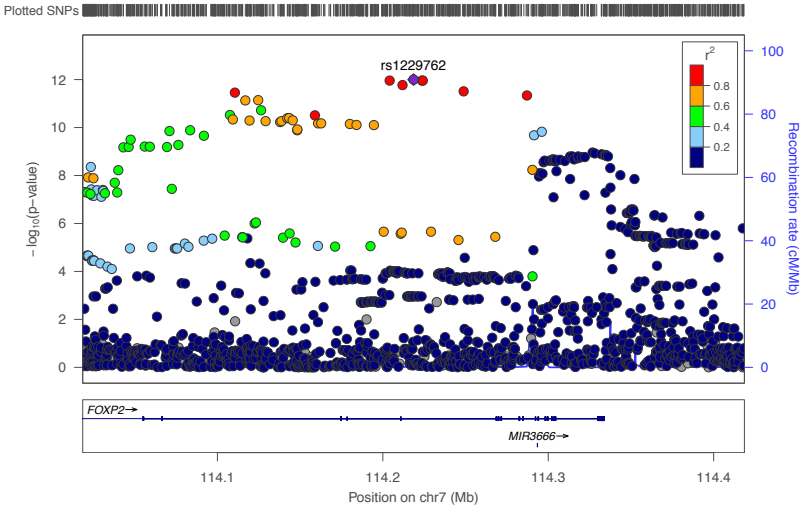
shortsleep_1



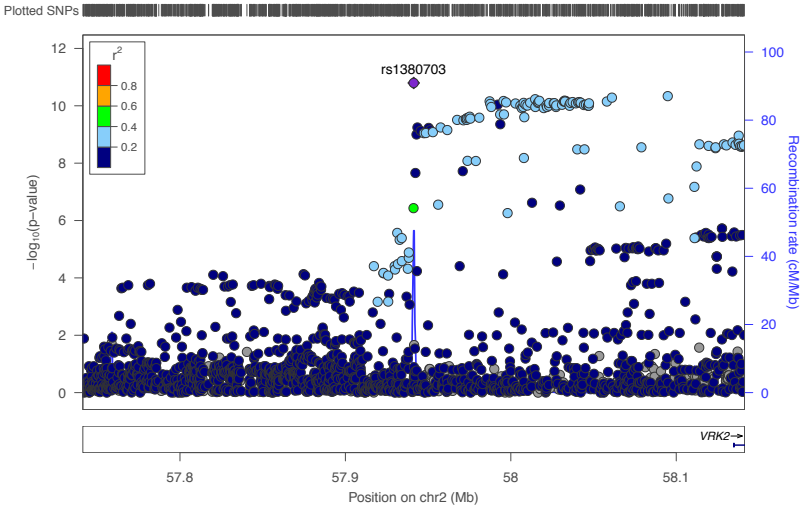
shortsleep_2



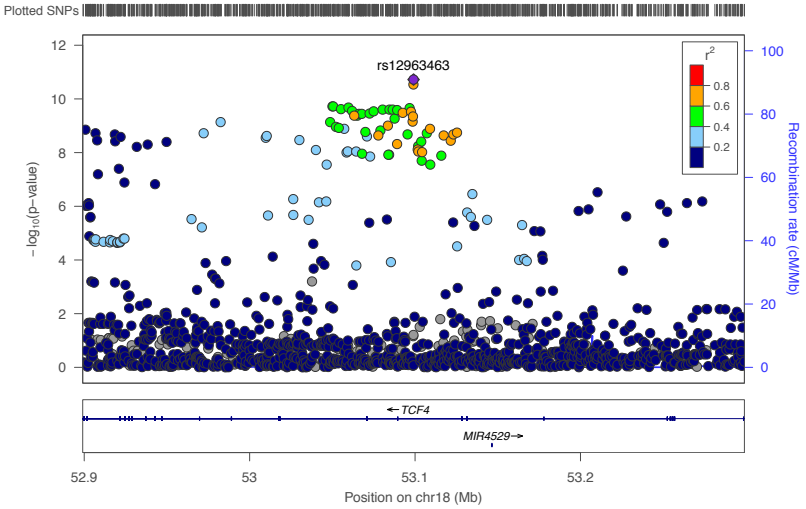
shortsleep_3



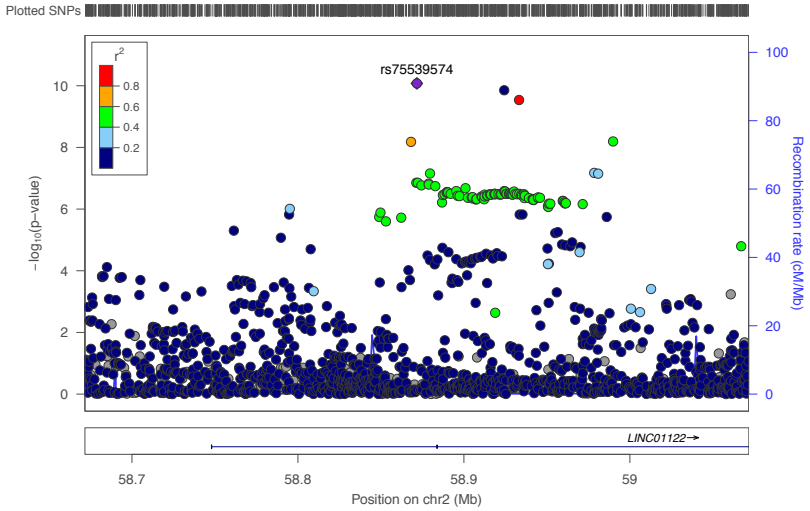
shortsleep_4



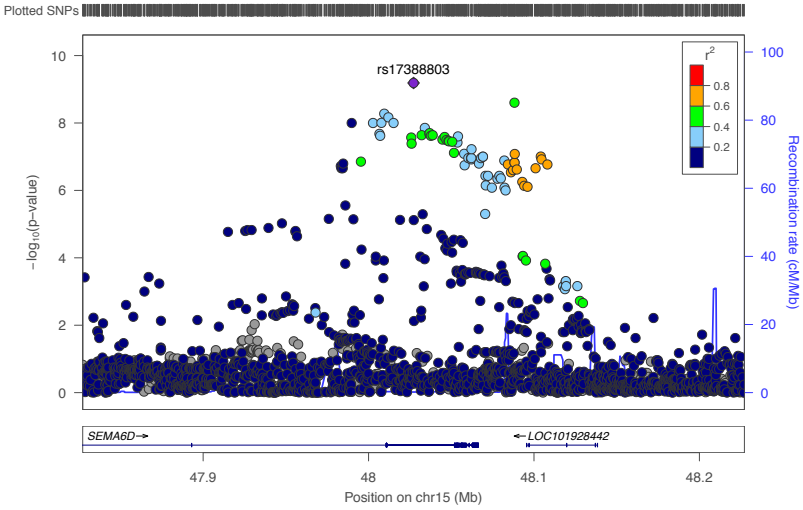
shortsleep_5



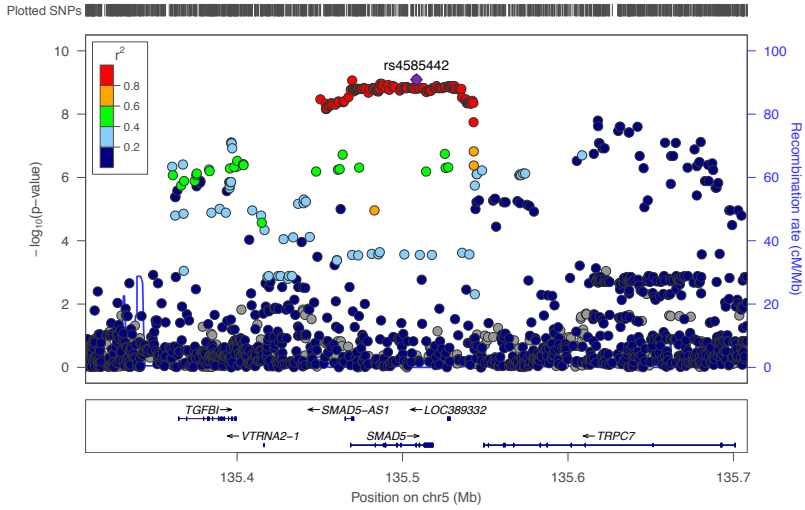
shortsleep_6



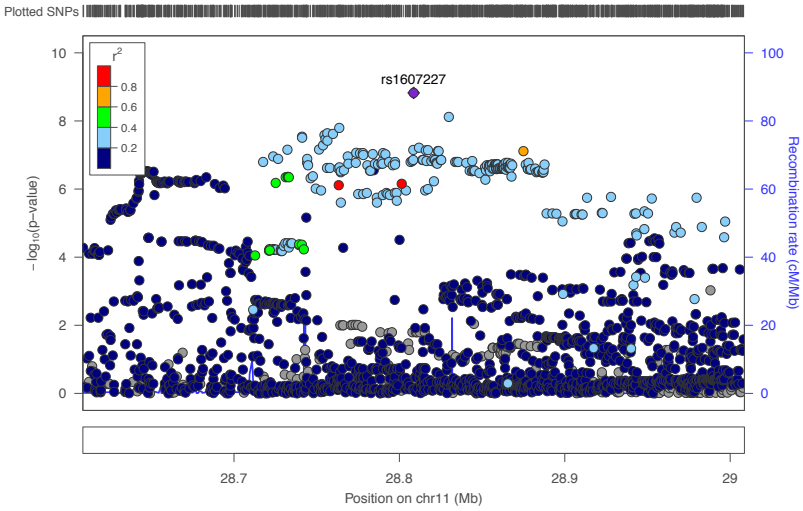
shortsleep_7



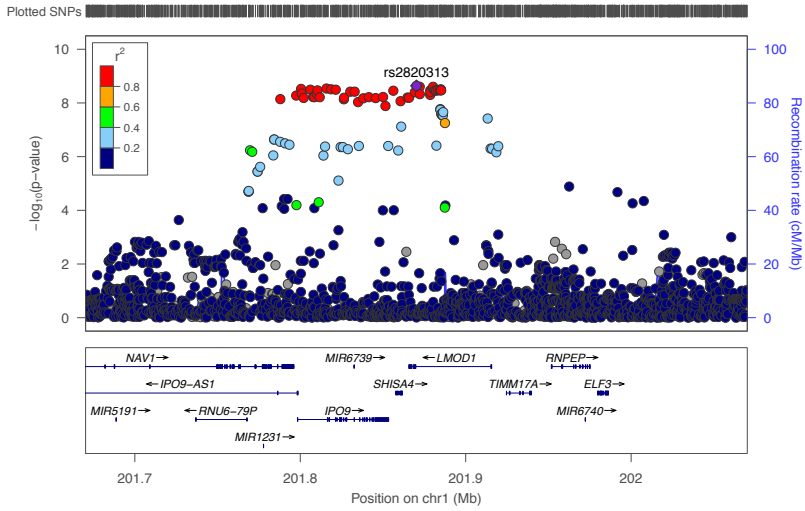
shortsleep_8



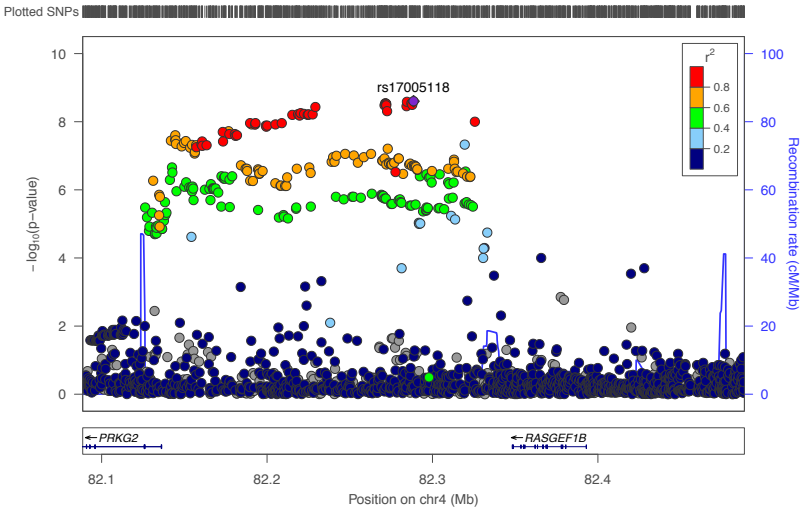
shortsleep_9



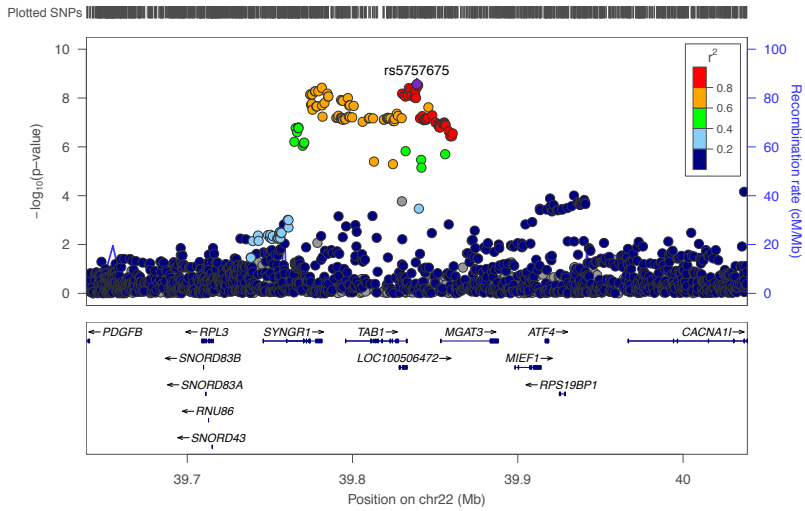
shortsleep_10



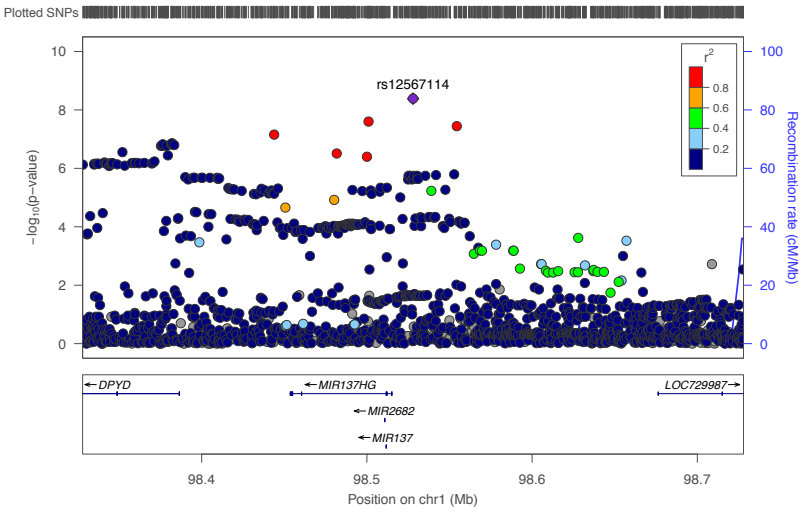
shortsleep_11



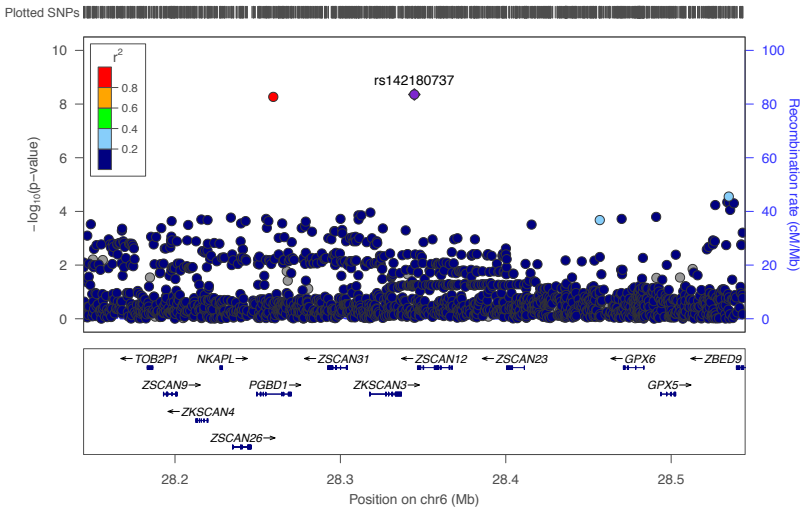
shortsleep_12



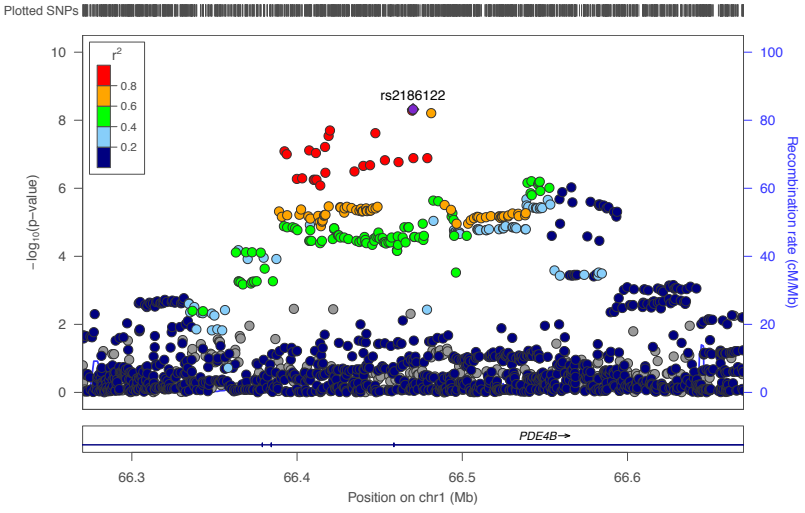
shortsleep_13



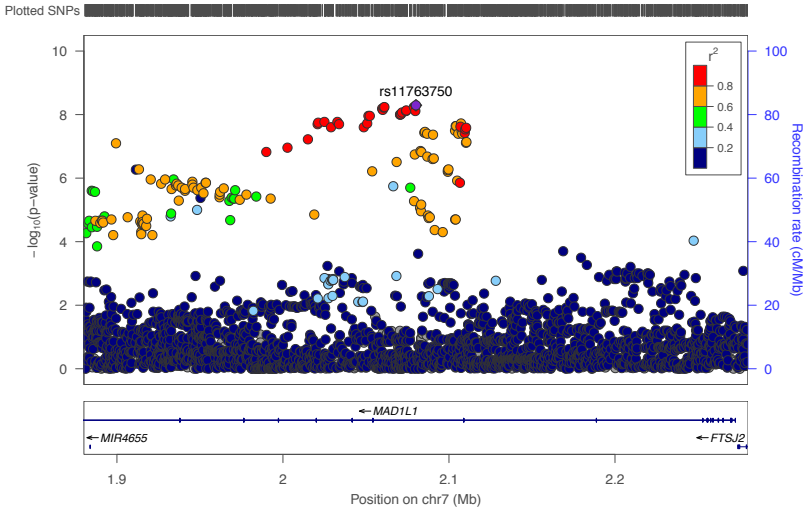
shortsleep_14



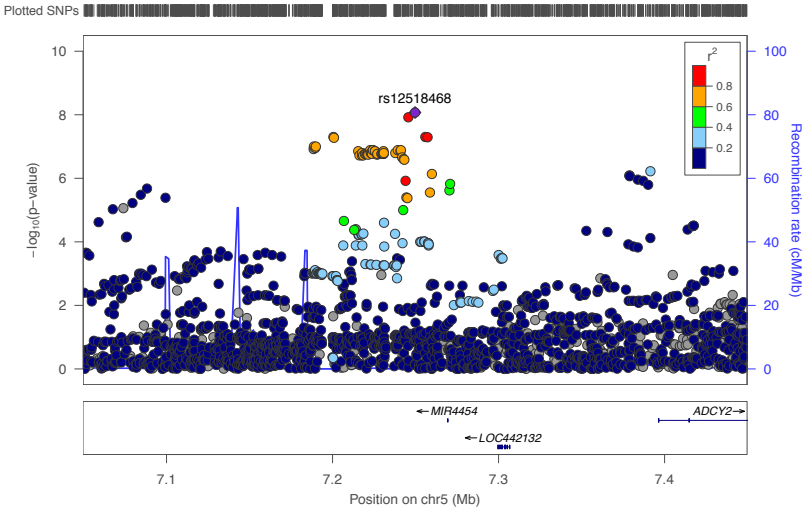
shortsleep_15



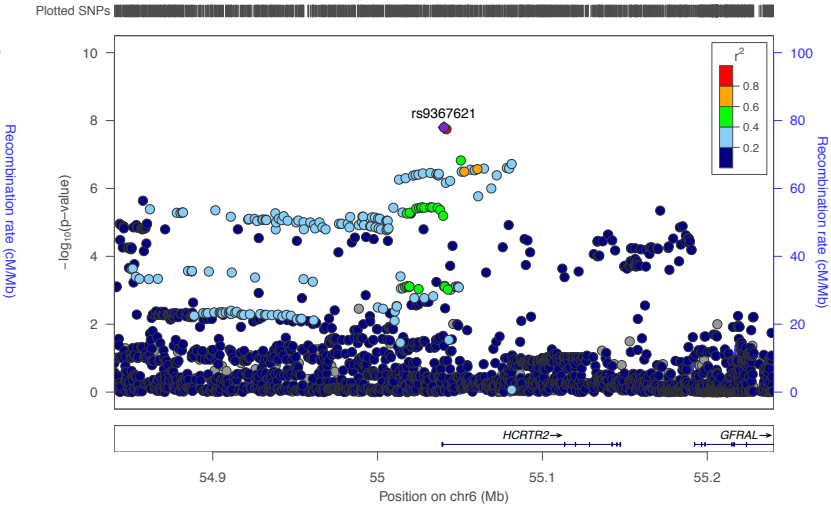
shortsleep_16



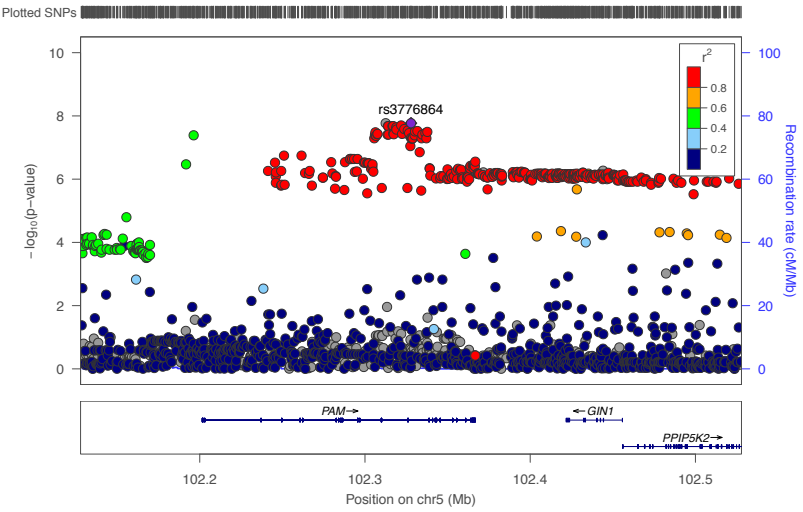
shortsleep_17



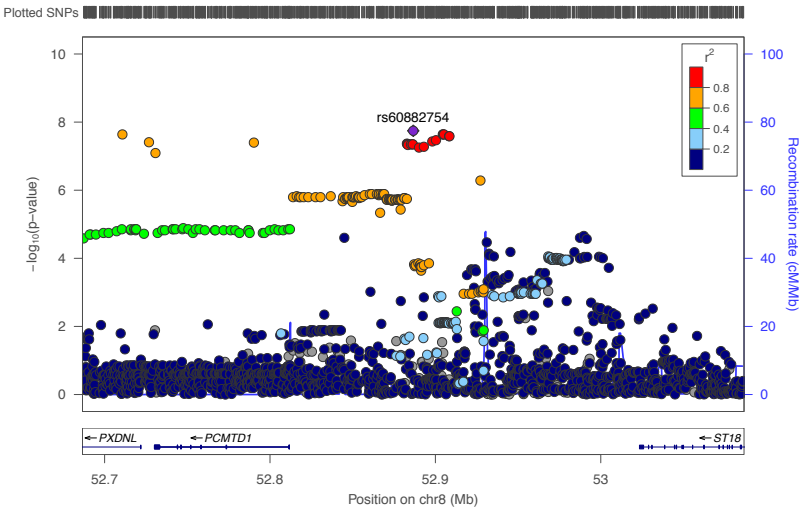
shortsleep_18



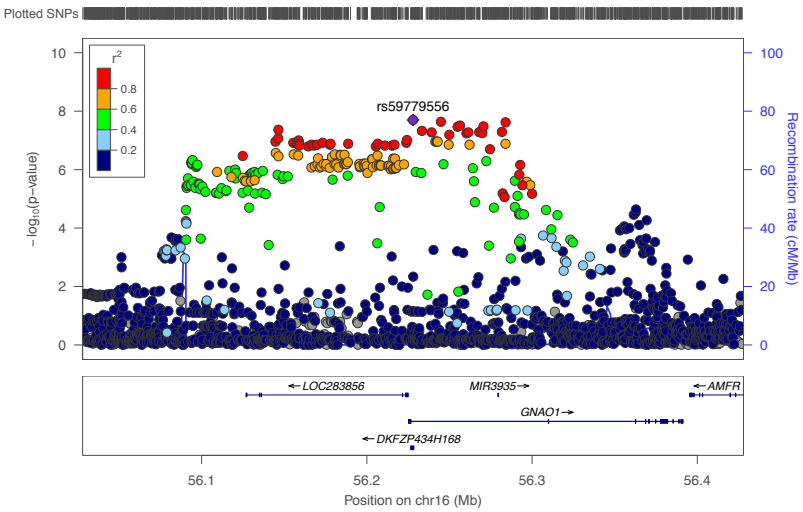
shortsleep_19



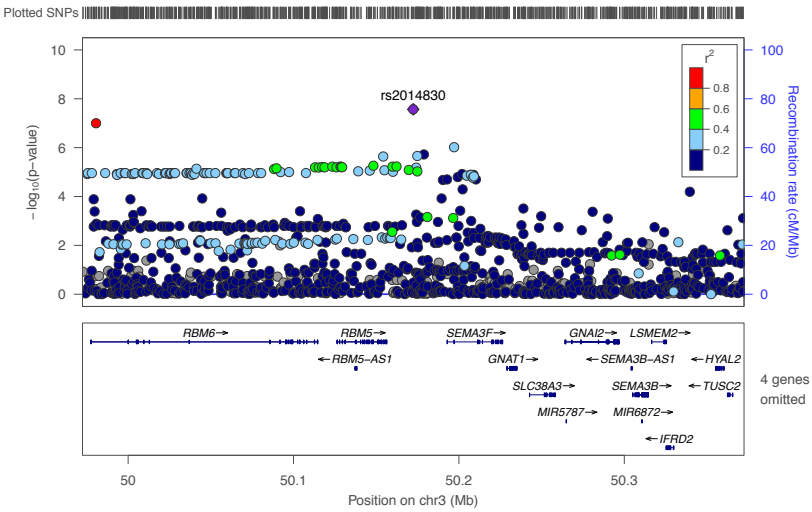
shortsleep_20



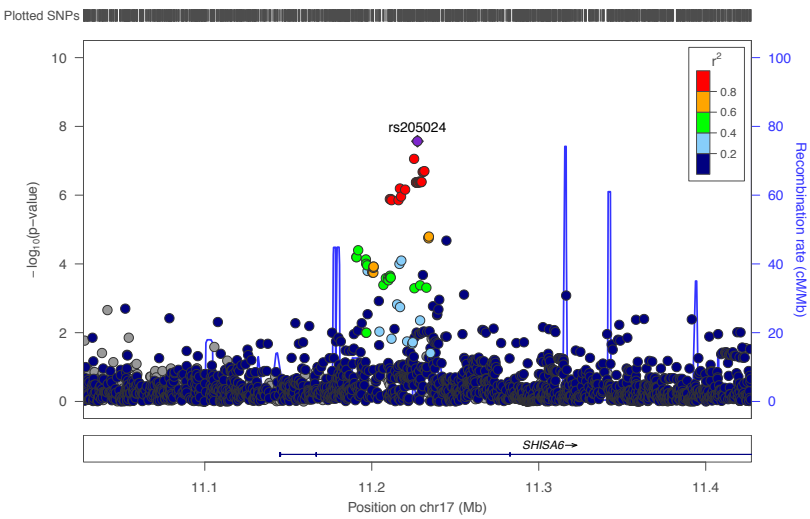
shortsleep_21



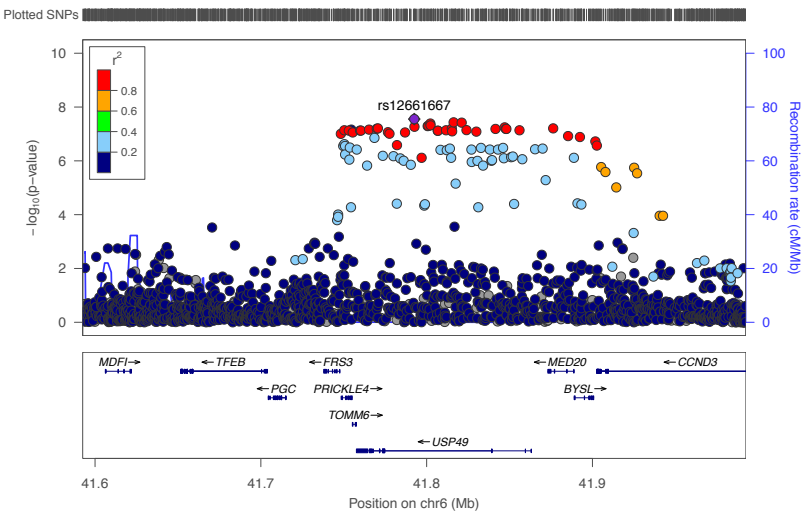
shortsleep_22



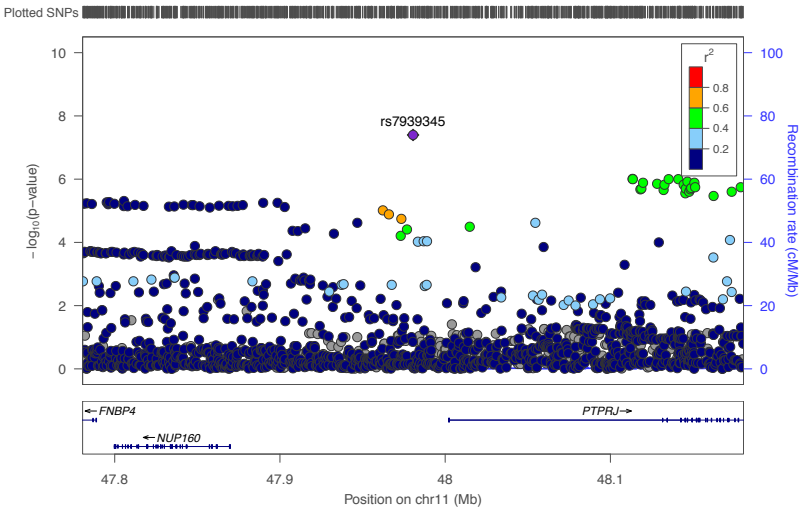
shortsleep_23



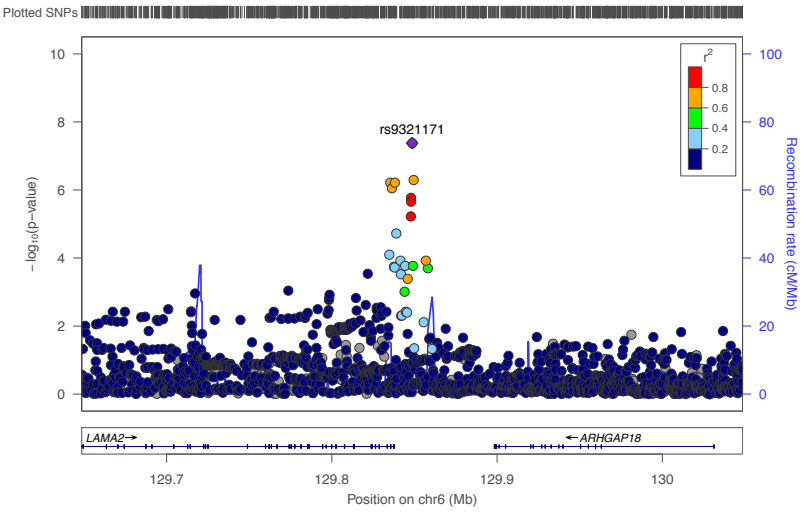
shortsleep_24



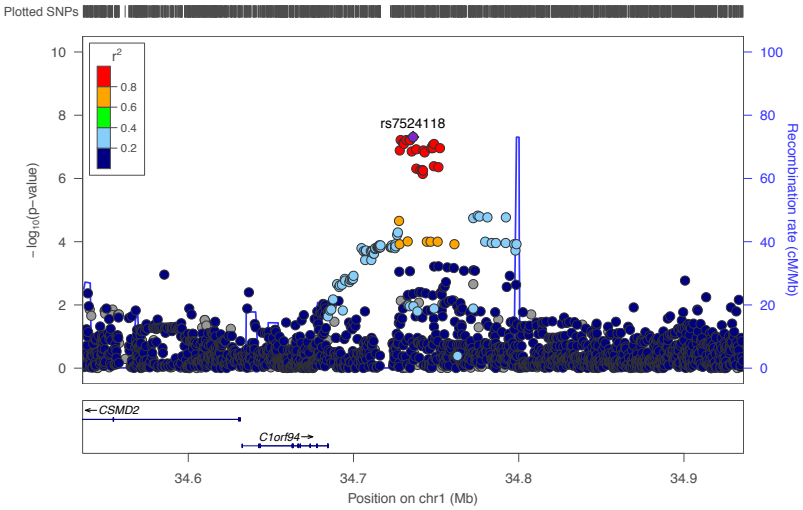
shortsleep_25



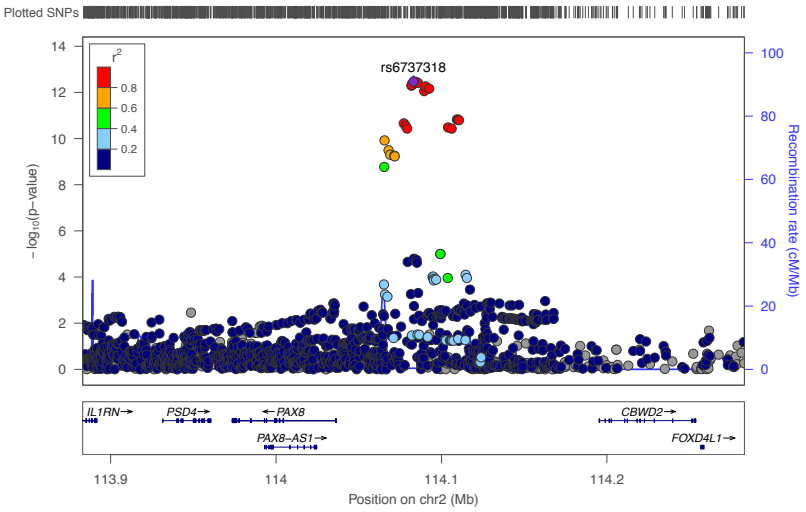
shortsleep_26



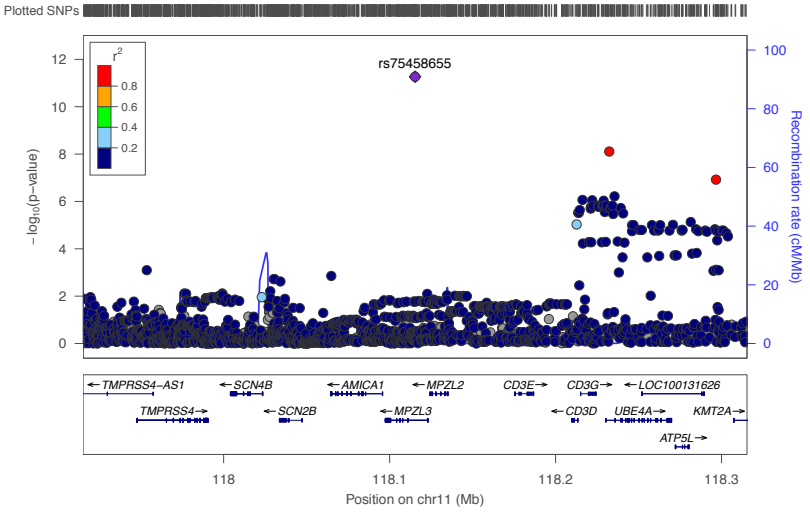
shortsleep_27



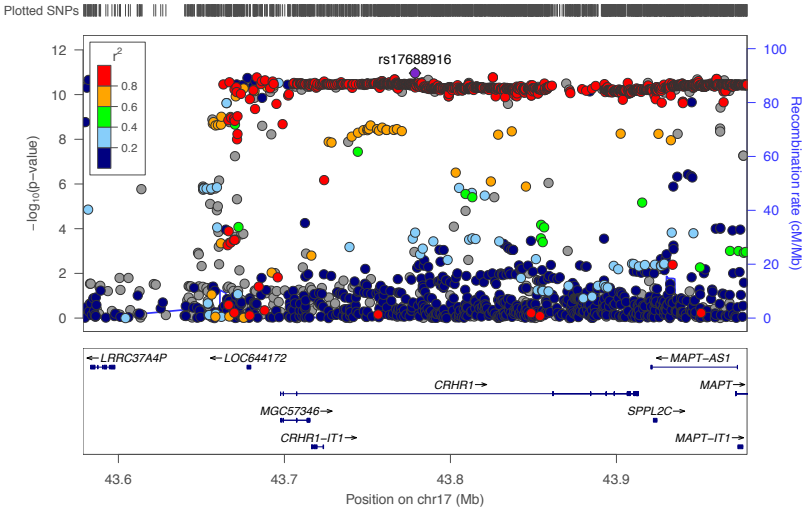
longsleep_1



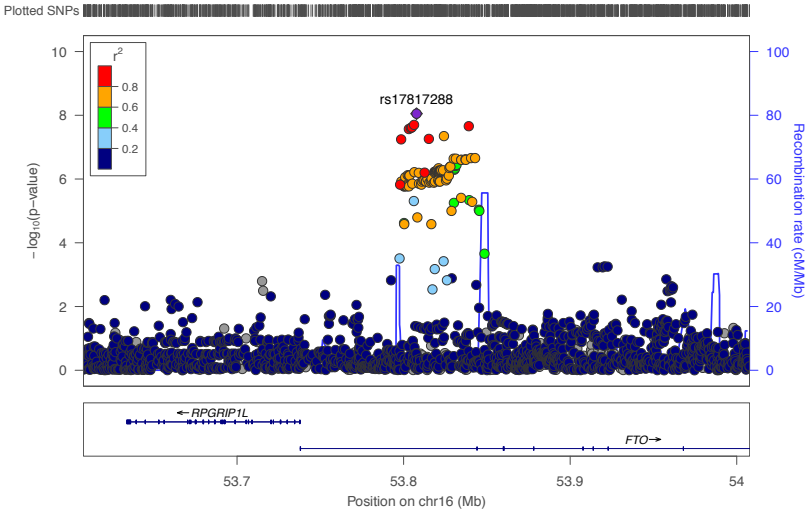
longsleep_2



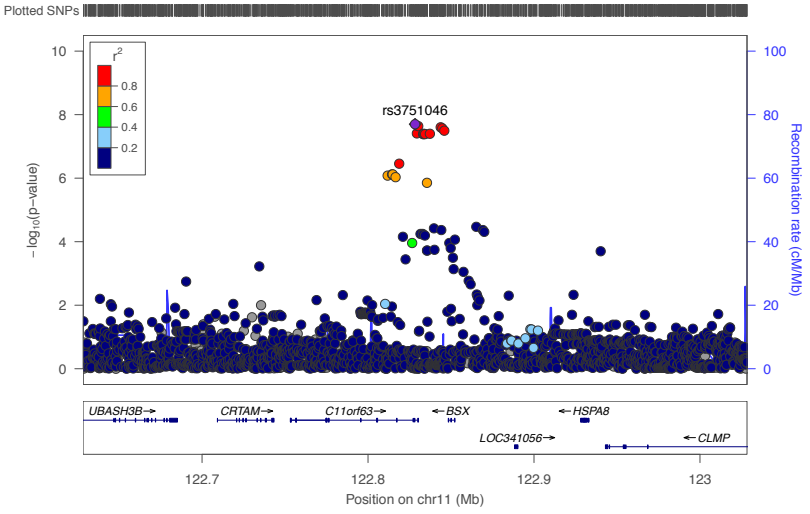
longsleep_3



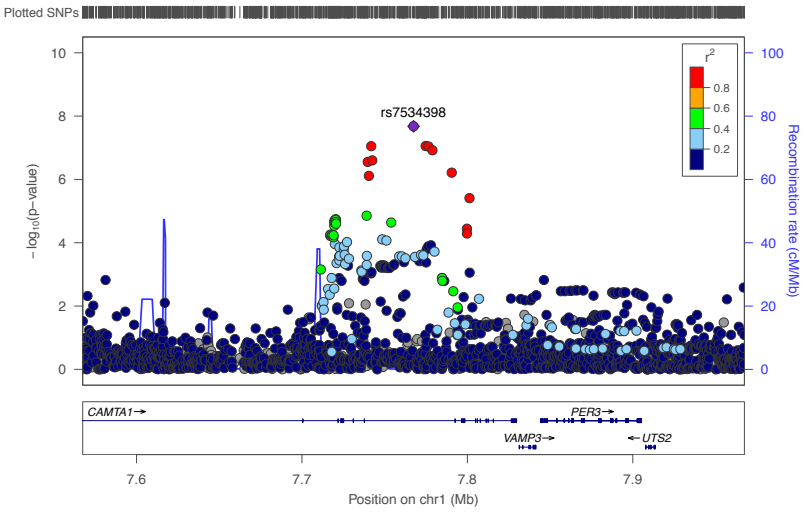
longsleep_4



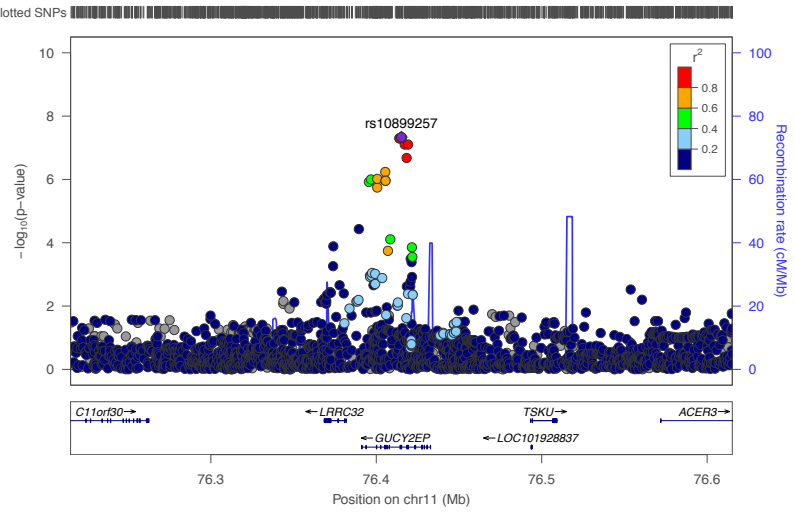
longsleep_6



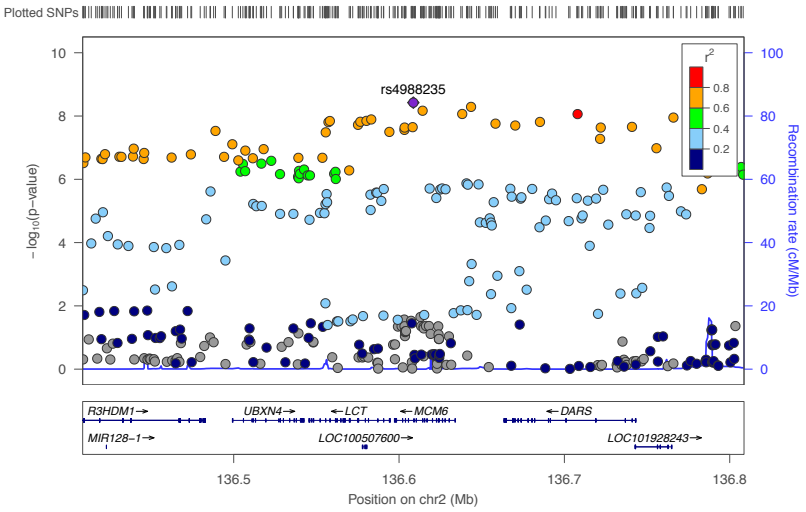
longsleep_7



longsleep_8



ma_adult_1



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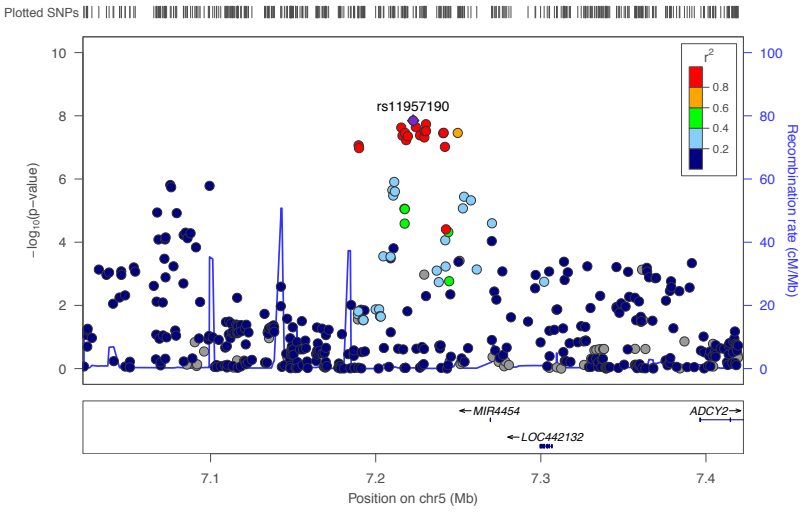
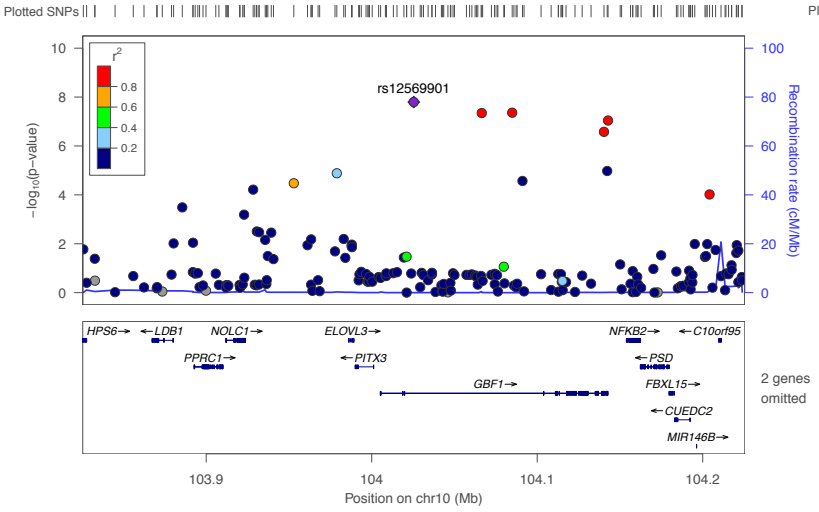


ma_adult_3



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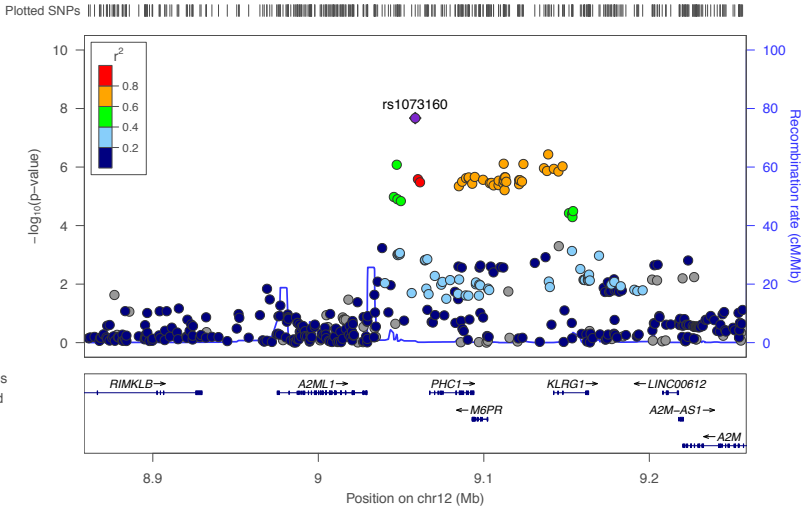

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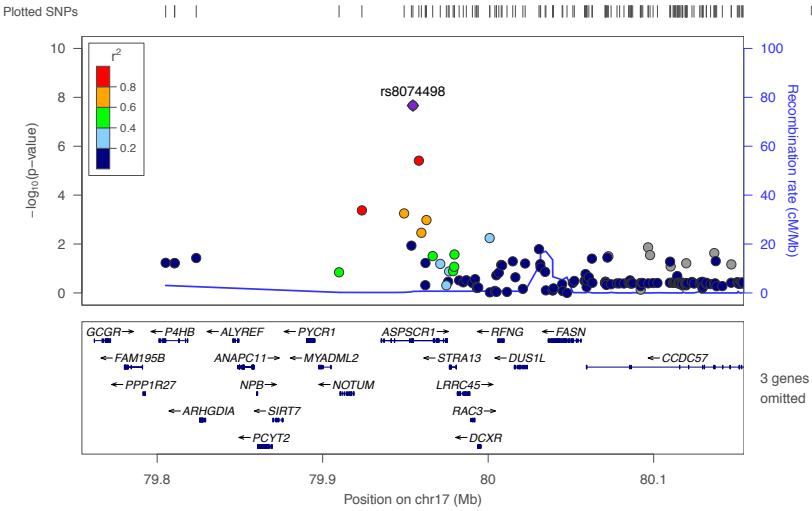
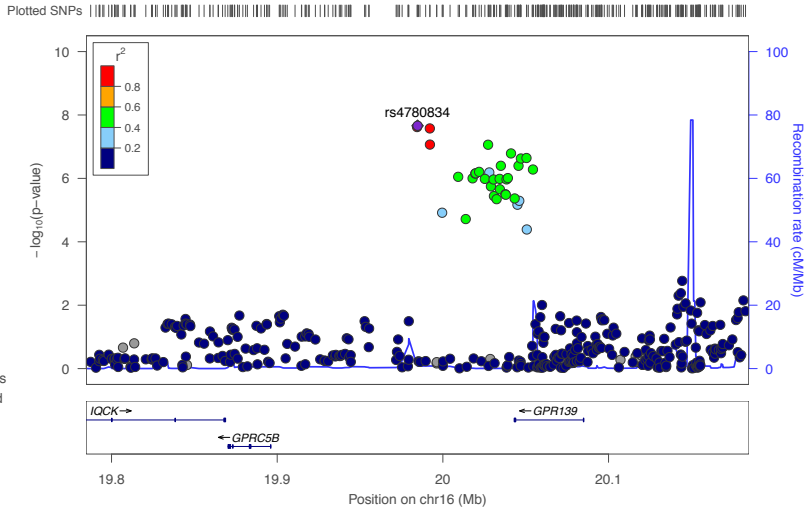
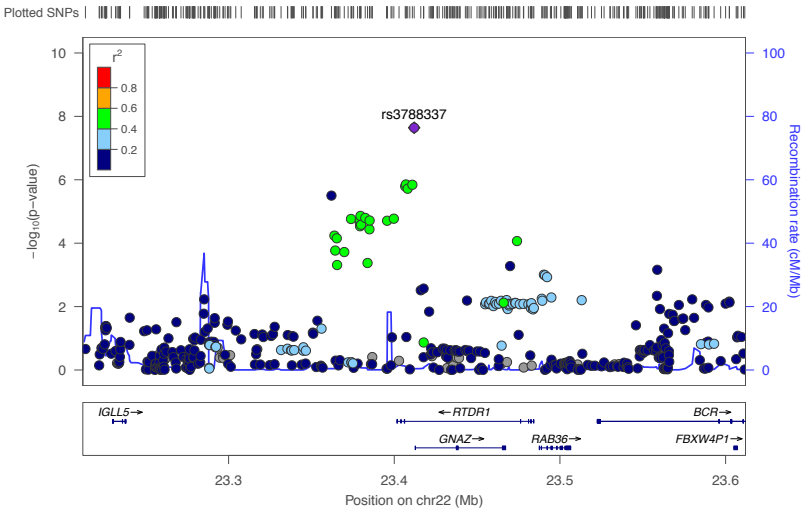


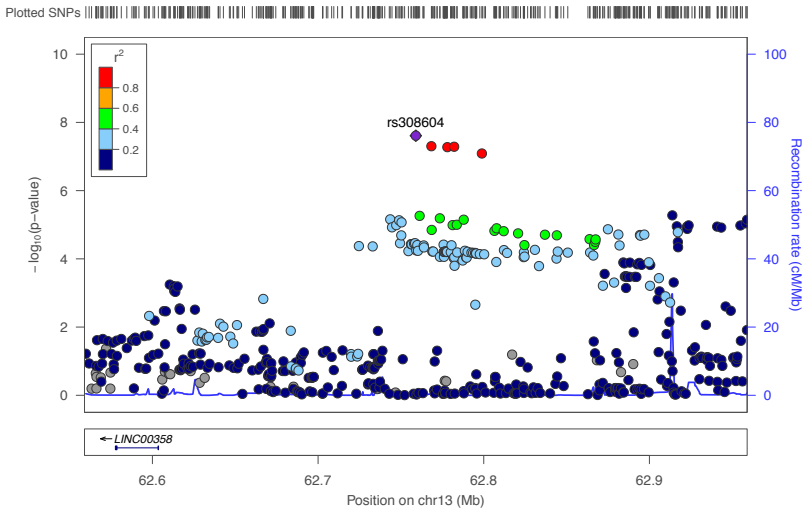
ma_adult_6



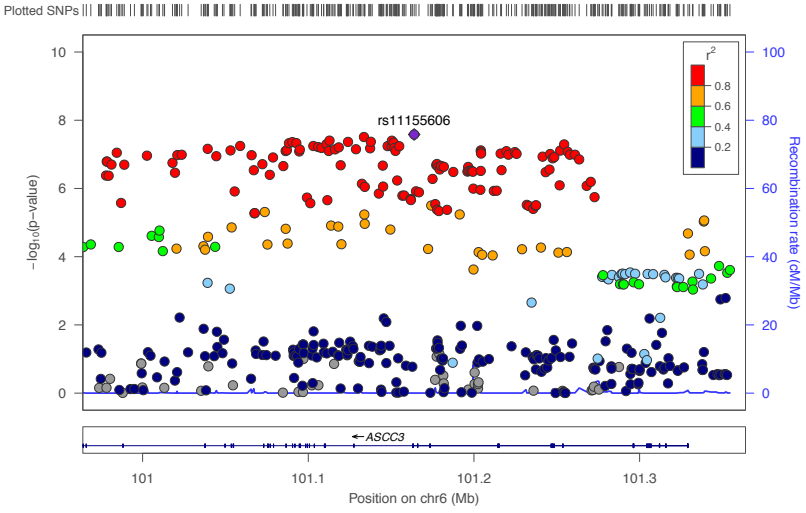
ma_adult_7



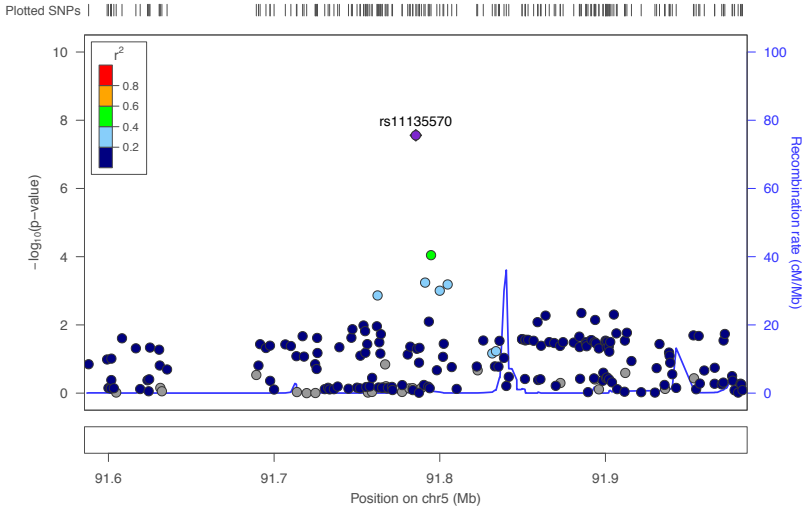
ma_adult_8



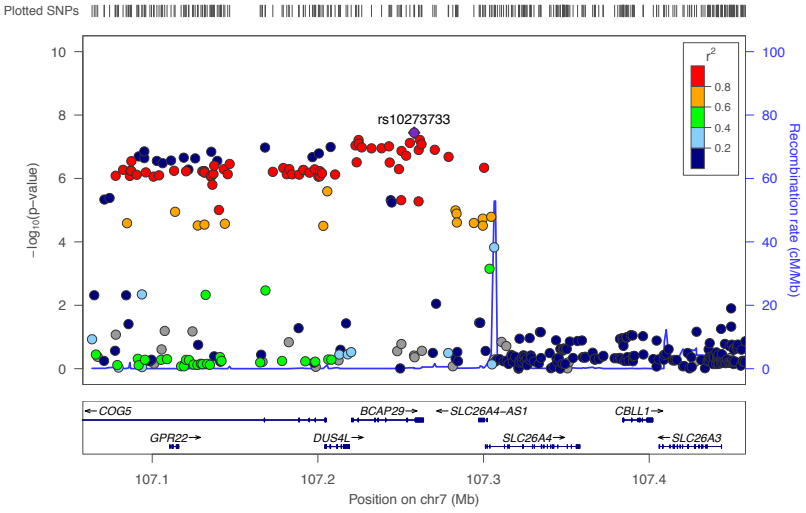
ma_adult_9



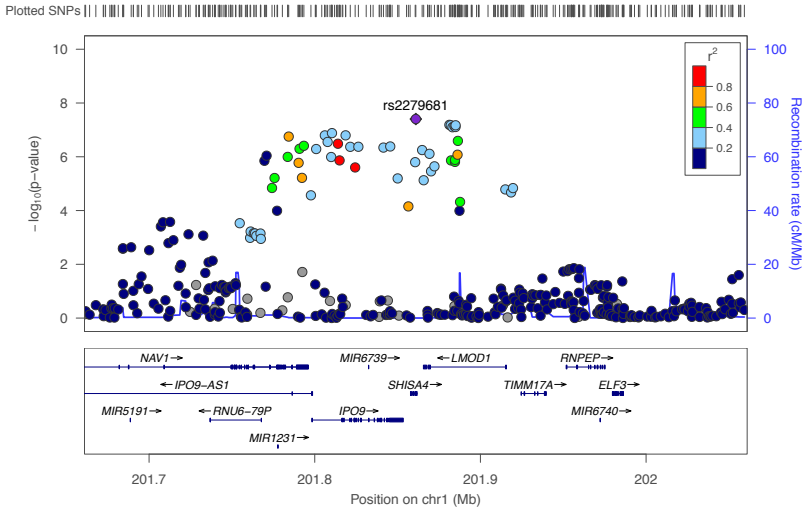
ma_adult_10



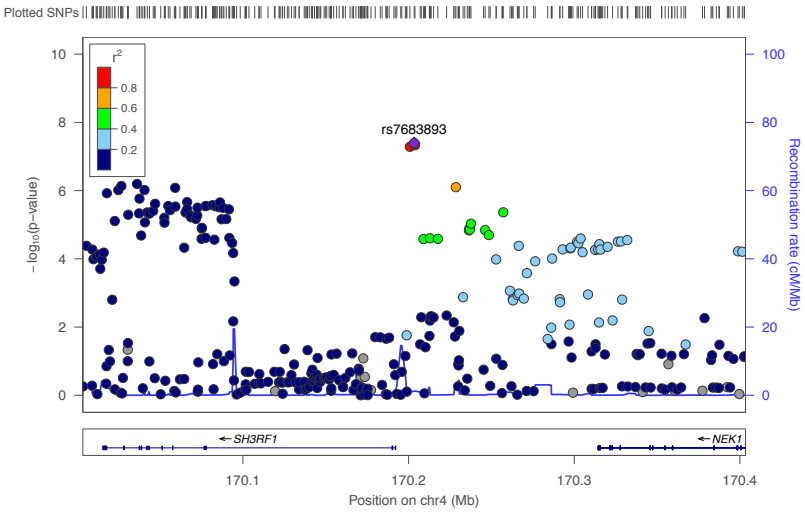
ma_adult_11



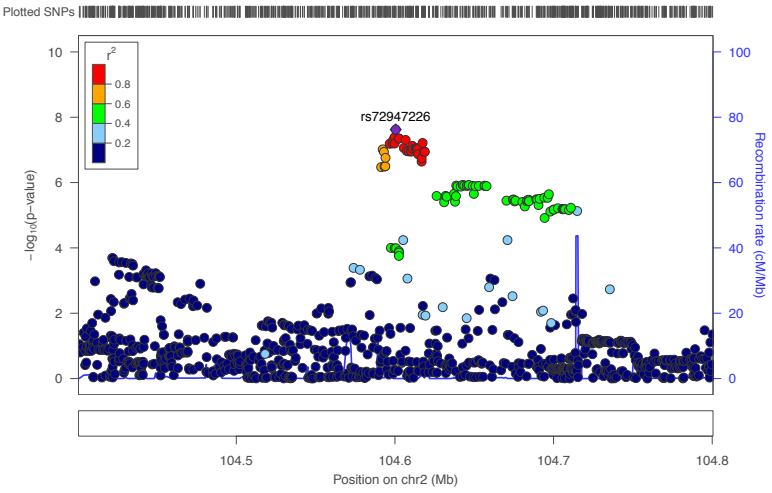
ma_adult_12



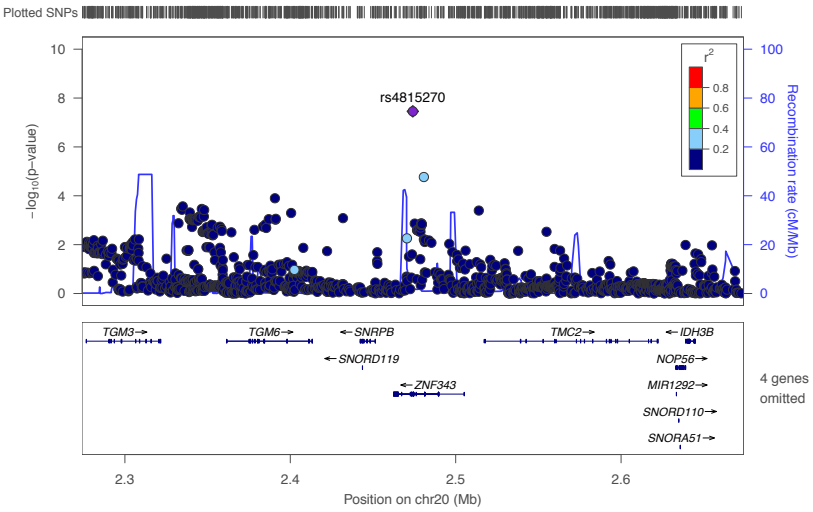
ma_adult_13


Plotted SNPs
r²
0.8
0.6
0.4
0.2
rs7683893
− log10(p−value)
Recombination rate (cM/Mb)
SH3RF1
NEK1
170.1
170.2
170.3
170.4
Position on chr4 (Mb)

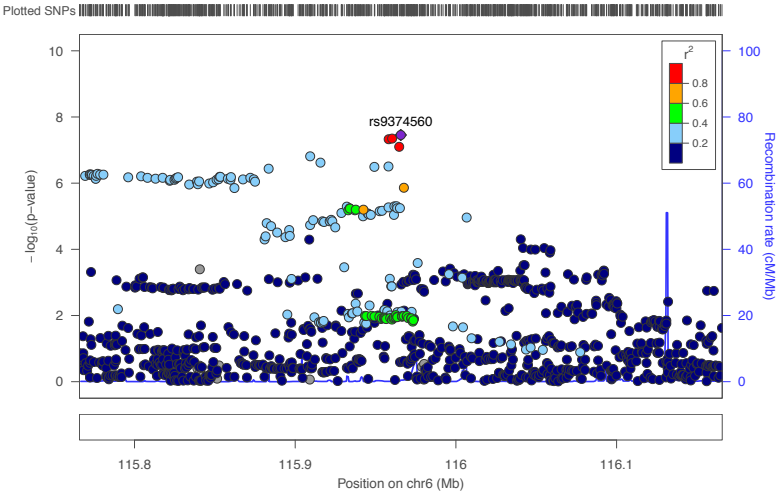
ma_children_1



ma_children_2



ma_children_3



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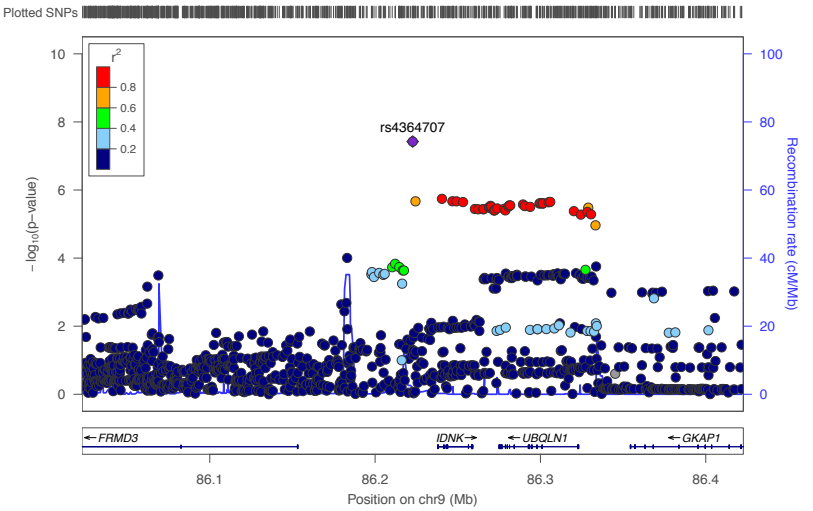
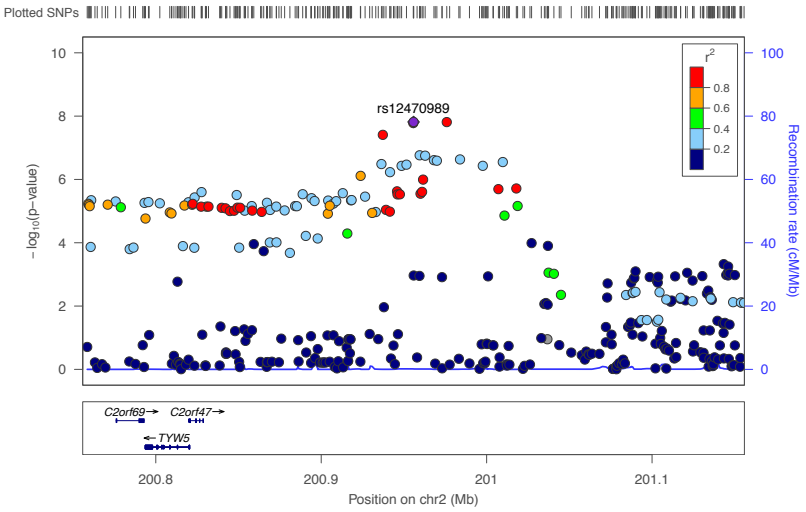


ma_all_1



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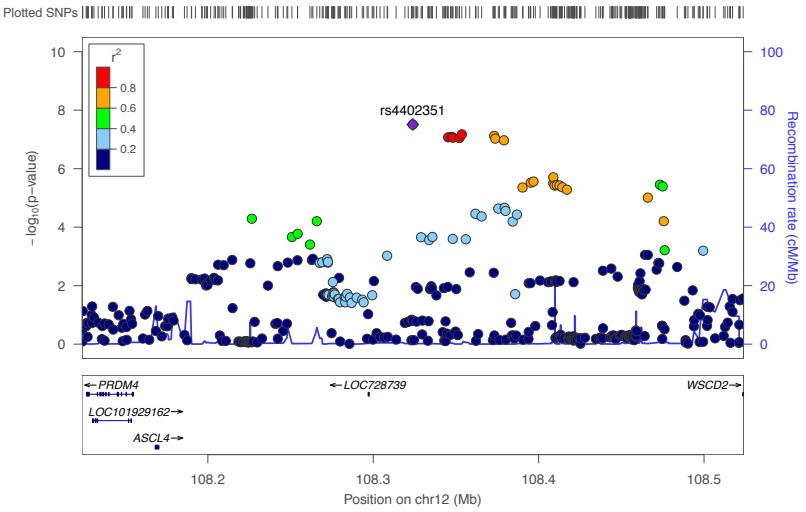
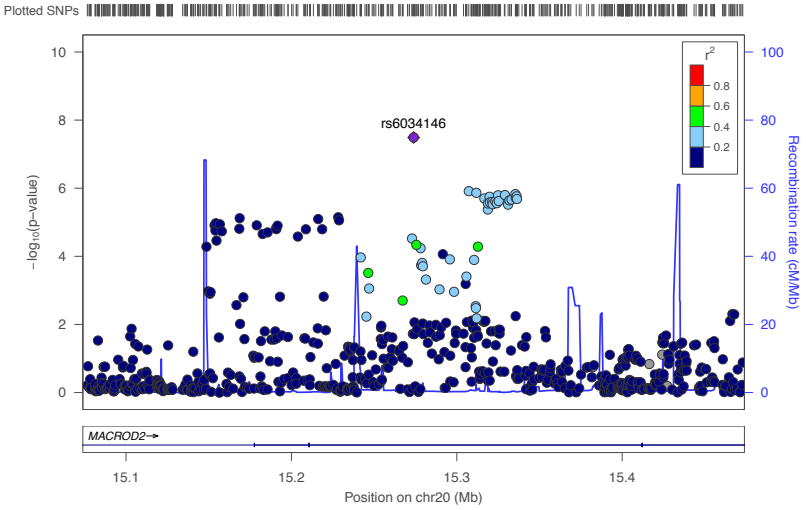
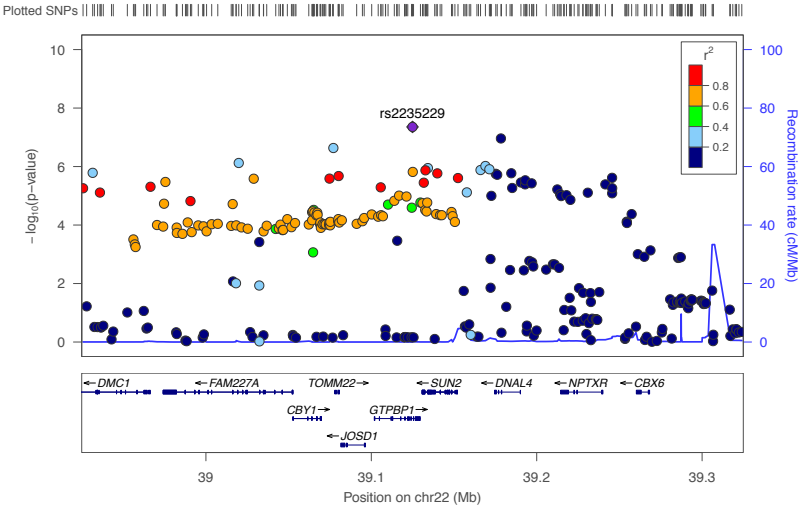


ma_all_3



ma_all_4