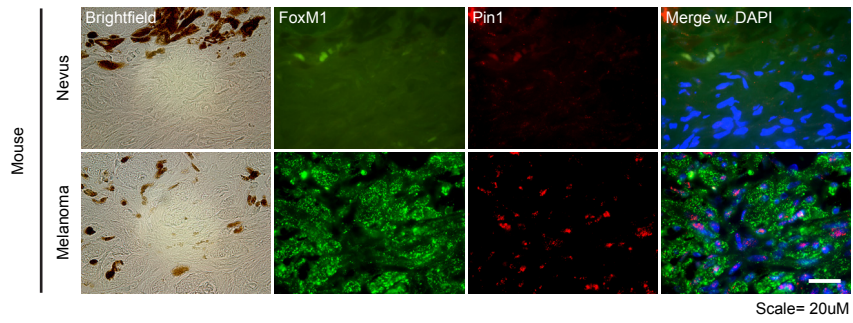
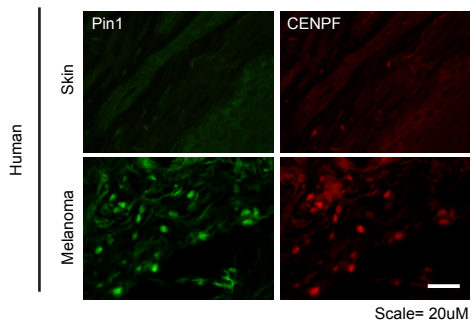


Supplementary Figures

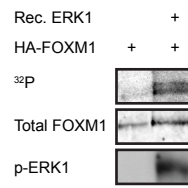
A)



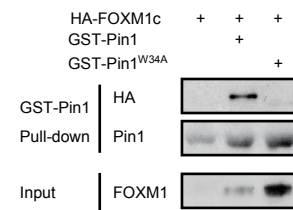
B)



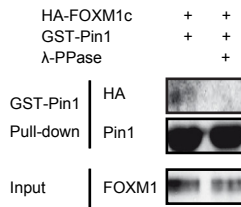
C)



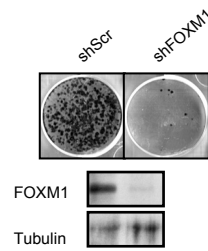
D)



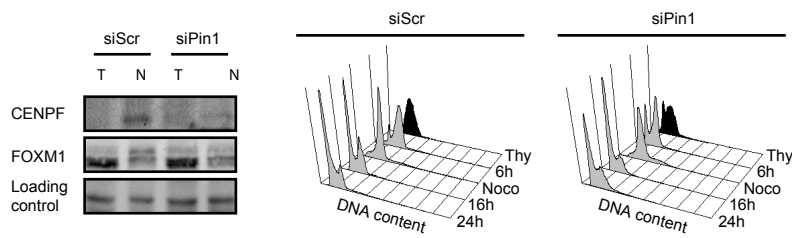
E)



F)

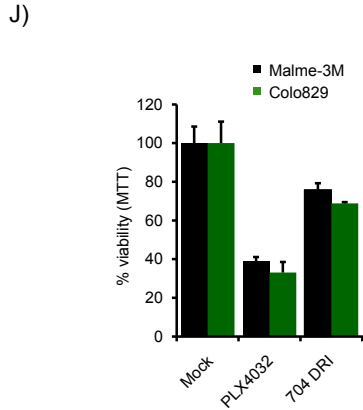
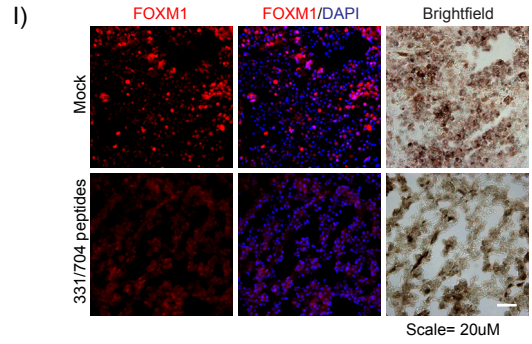


G)



Supplementary Figures

H)
 Human pldlisvpfgnsspsdidvpkpgs**sp**epqvs^glaa
 |.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.|.
 Mouse pfdlasdpfgspppphvegpkpgsp**el**qipslsa



K)

Non-mutated sequences in EM5 melanoid
Whole genes: PTEN, p53
Cancer hotspots: AKT1, ALK, APC, CTNBB1, EGFR, ERBB2, EZH2, FBWX7, FOXL2, GNA11, GNAQ, GNAS, HRAS, IDH1, IDH2, KIT, KRAS, MET, NOTCH1, NRAS, PDGFRa, PIK3CA,RET, SMAD4, STK11
SNPs: 1p, 8p, 19q, APC, ARID1A, ATM, BRCA1, BRCA2, CDKN2A, FHIT, PTEN, RB1, SMAD4, STK11, TP53, VHL

