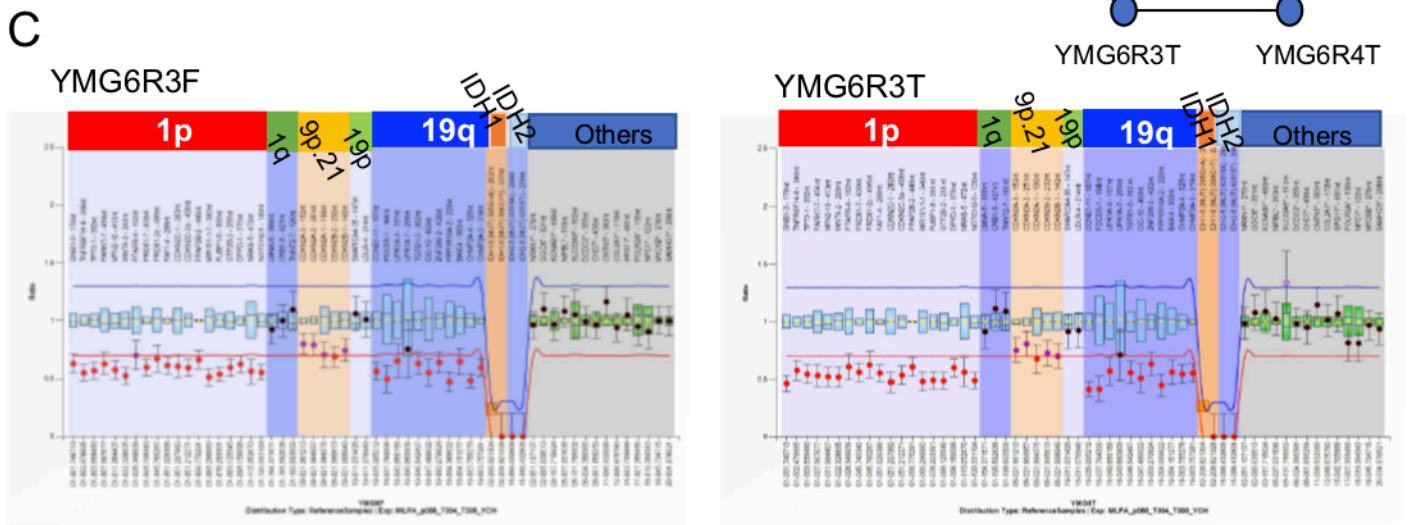
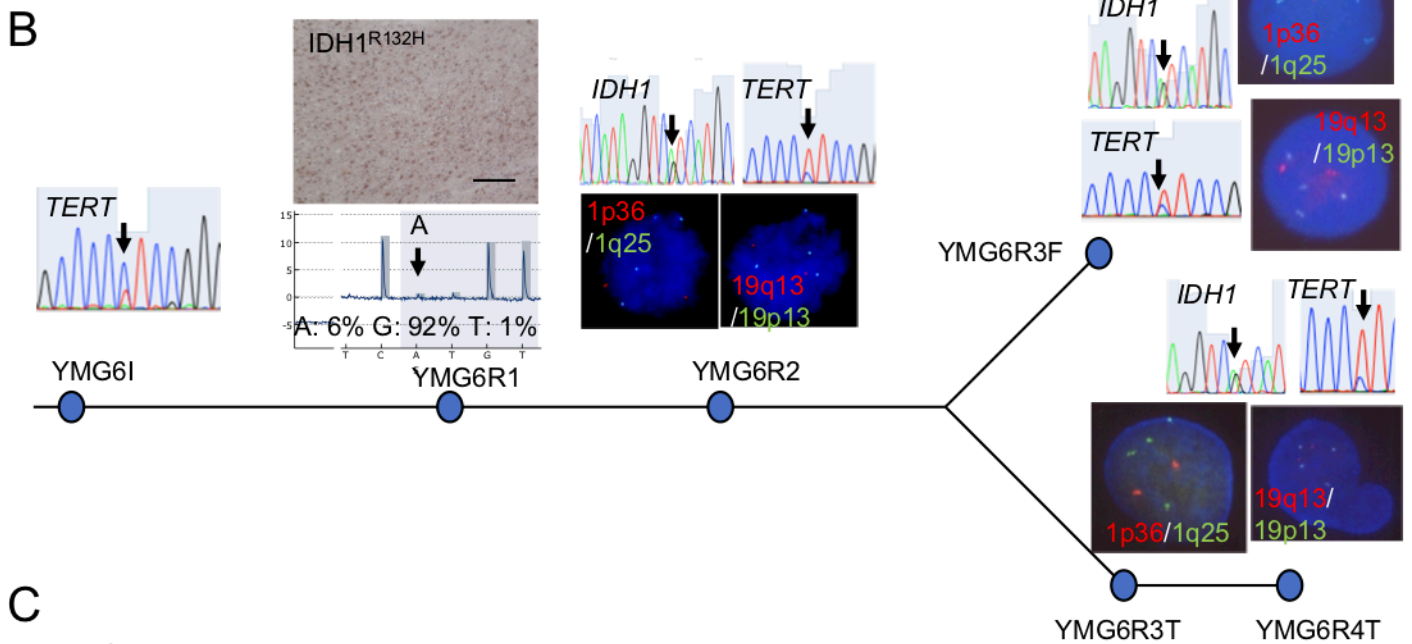
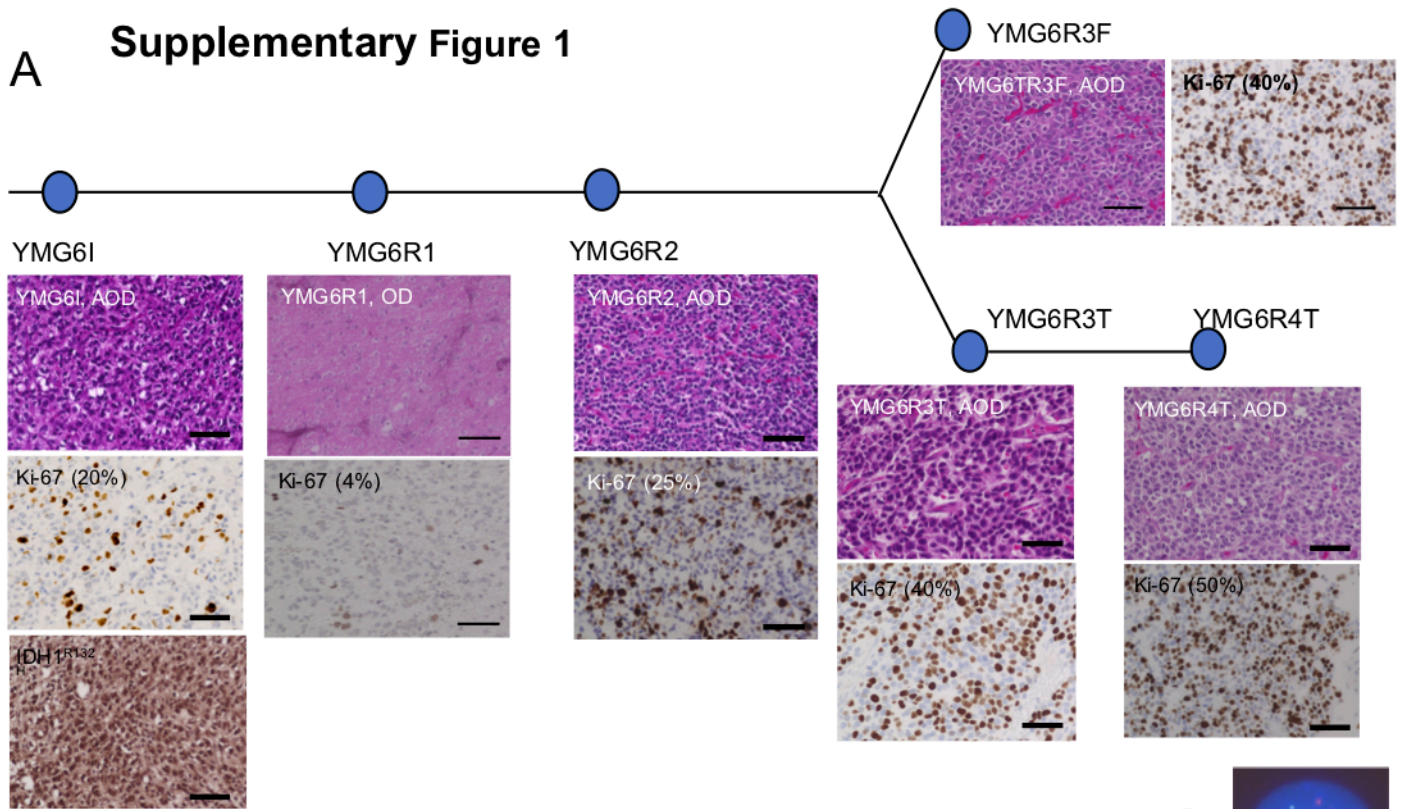
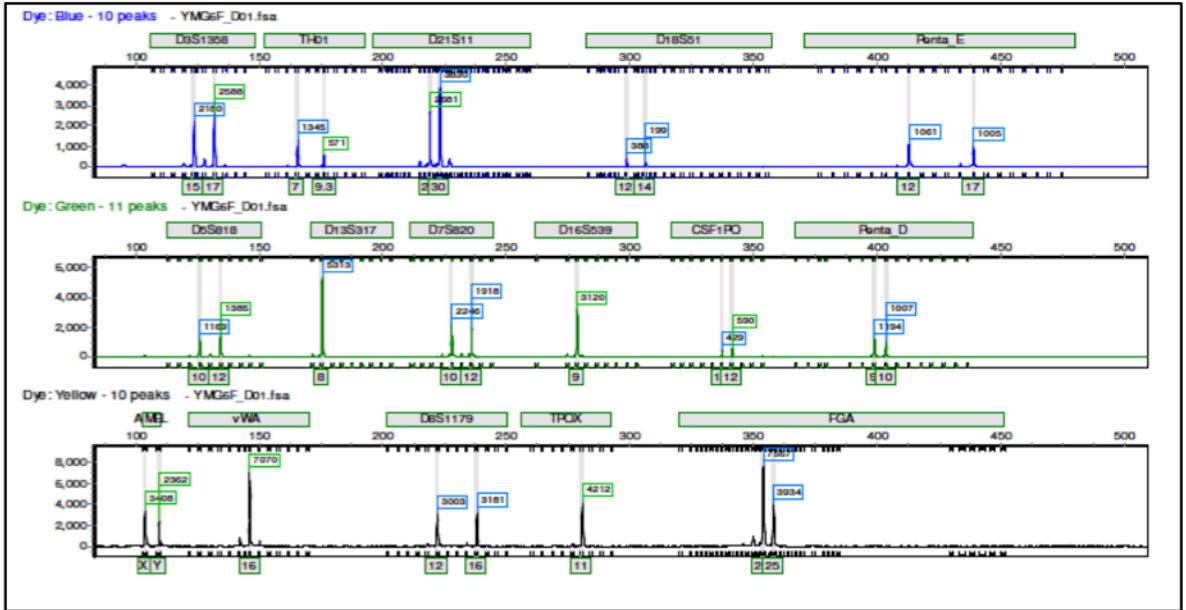


# A Supplementary Figure 1

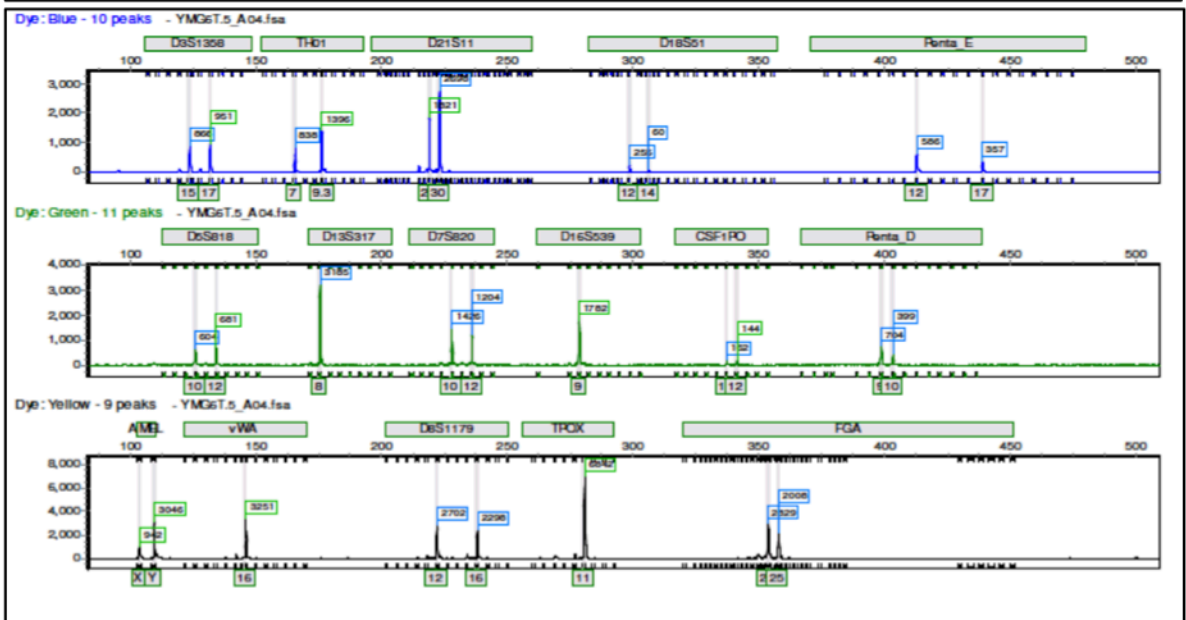


# Supplementary Figure 2

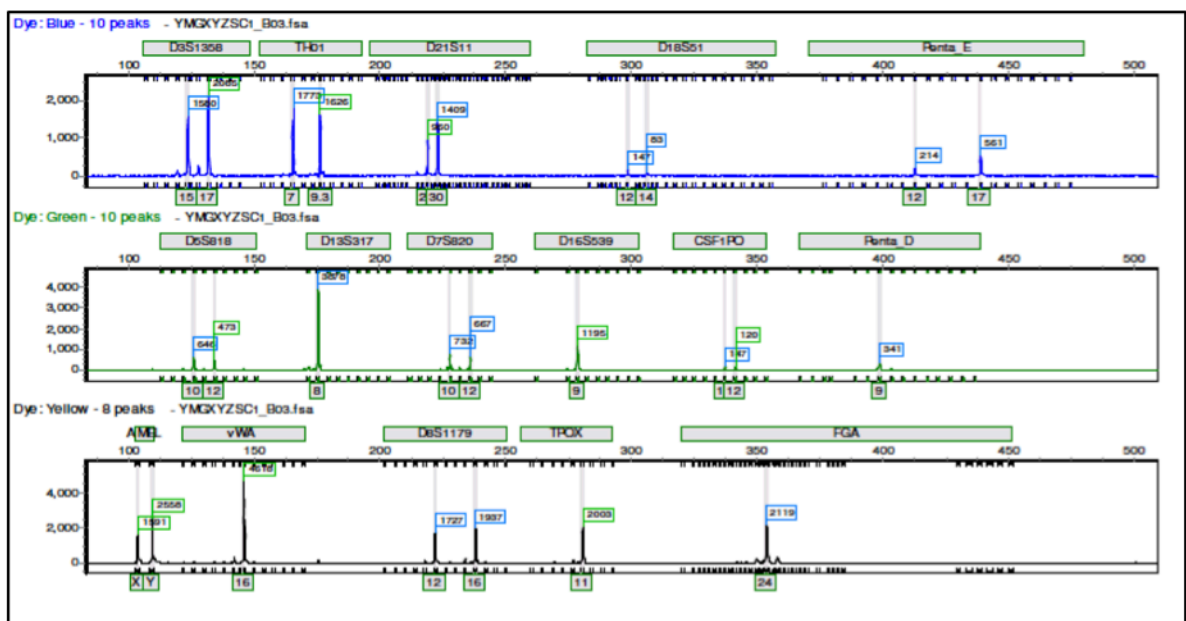
YMG6R3F



YMG6R3T

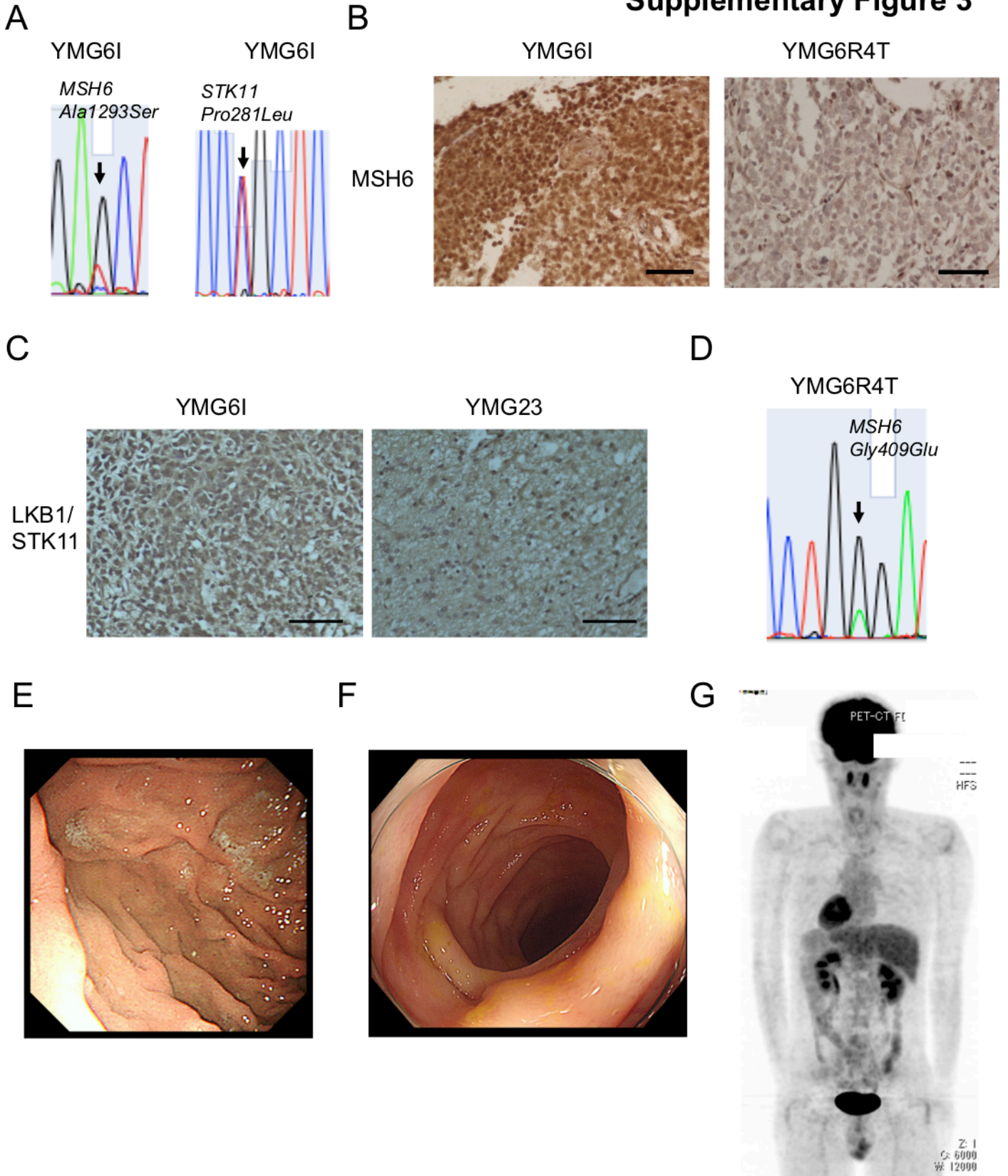


YMG6R3T  
sc1

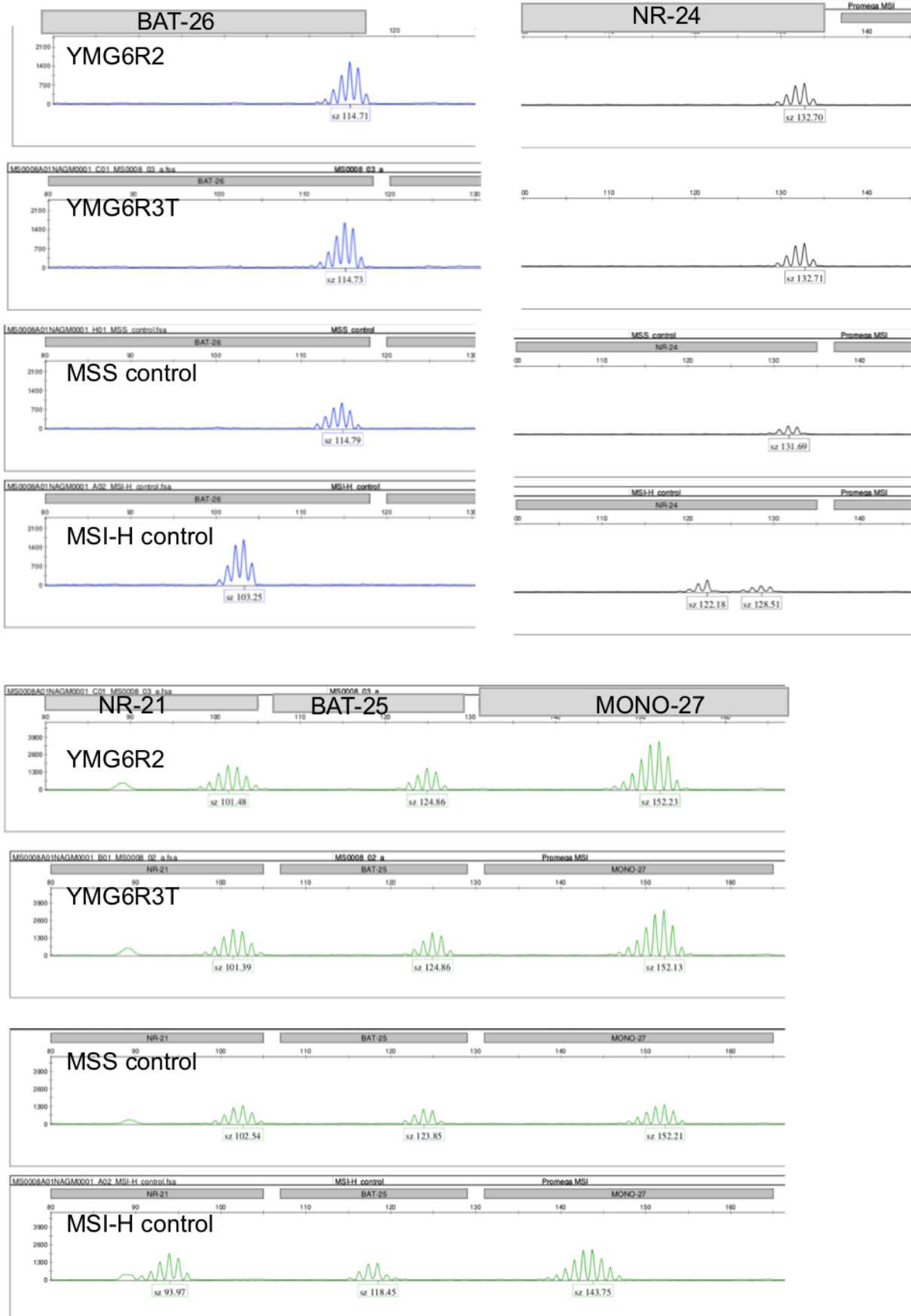




### Supplementary Figure 3



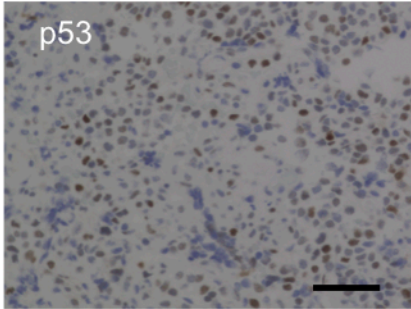
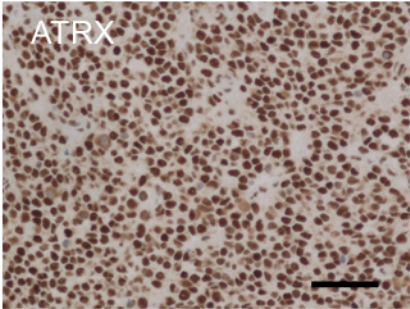
# Supplementary Figure 4





# Supplementary Figure 5

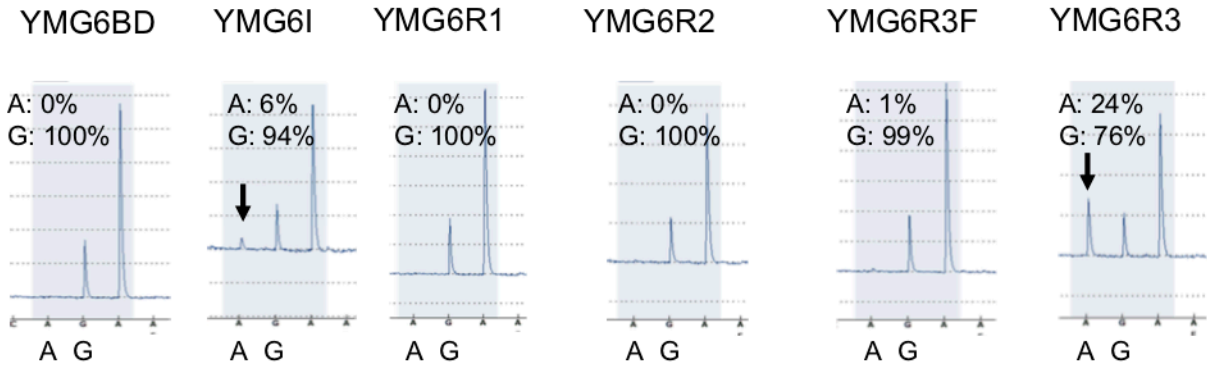
YMG6R3T



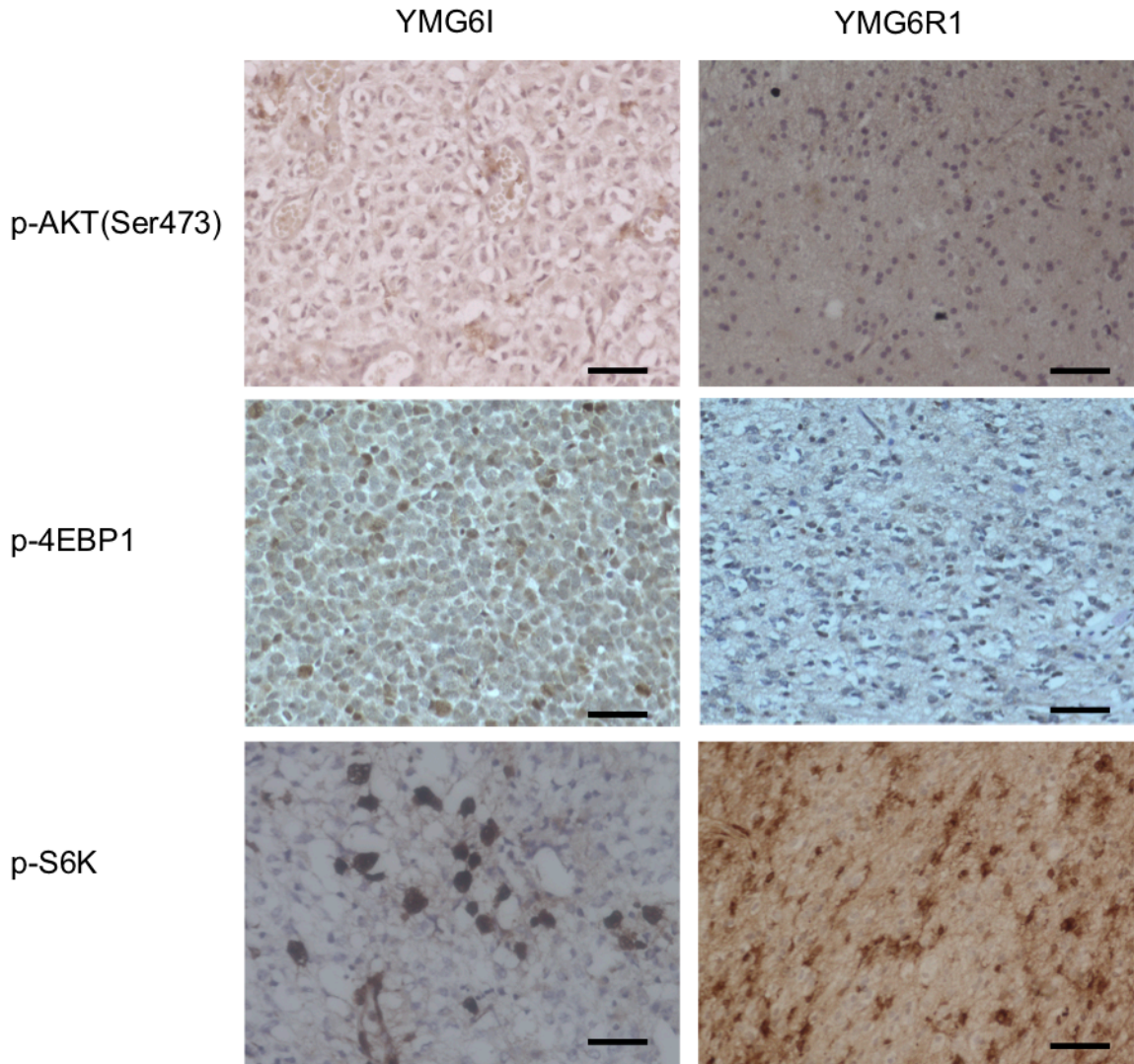
# Supplementary Figure 6

A

*PIK3CA*<sup>E542K</sup> (c.1624G>A)



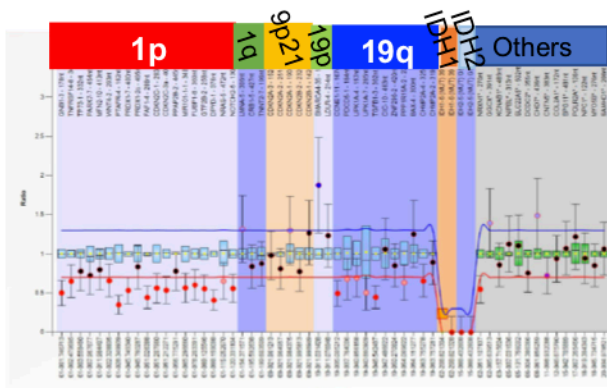
B



# Supplementary Figure 7

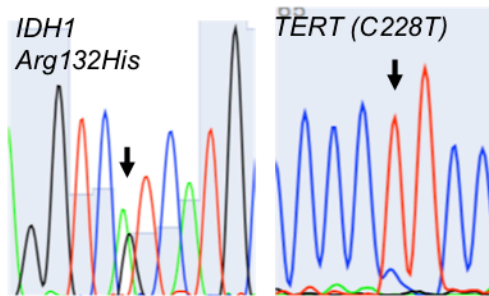
A

YMG6R3Tsc1



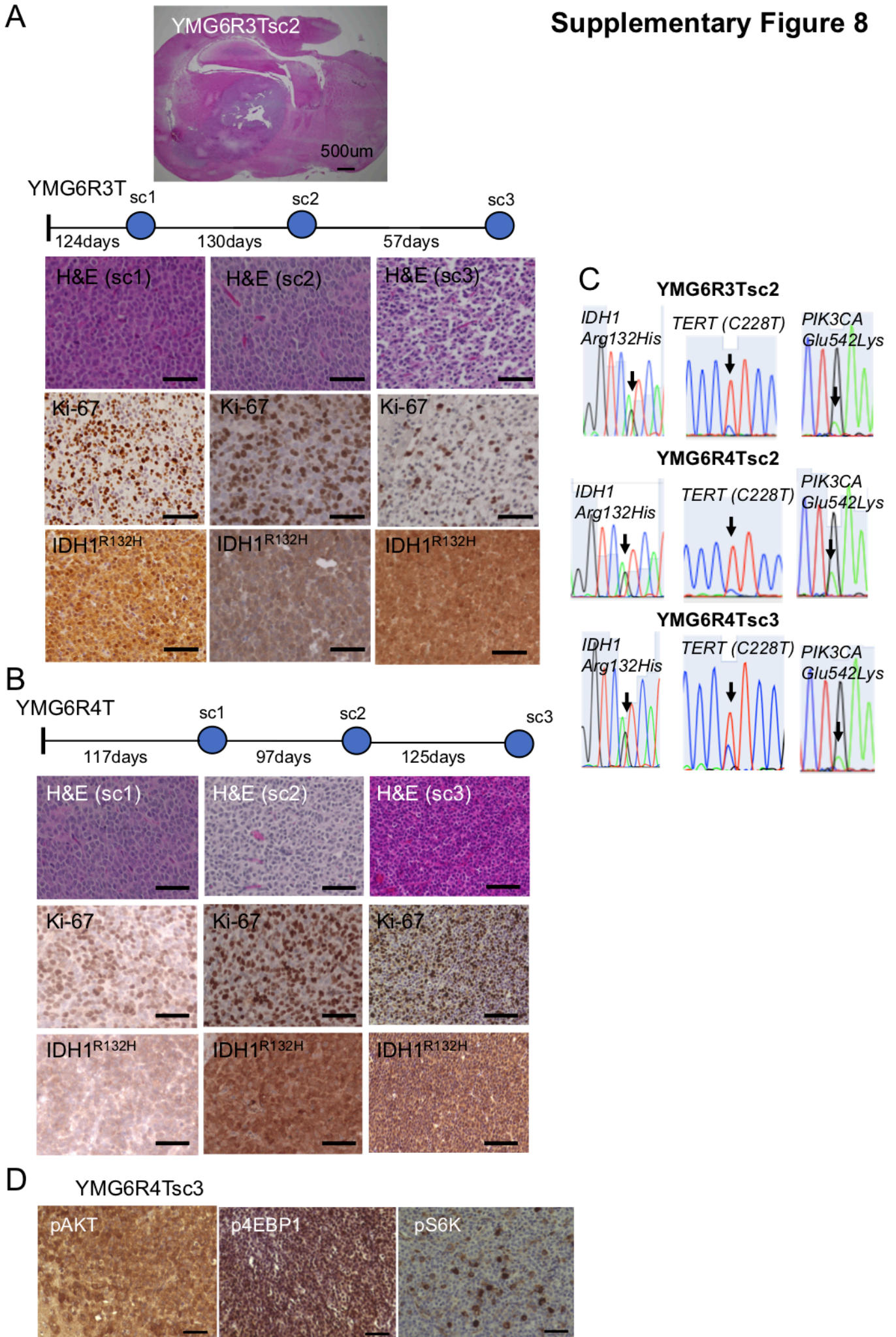
B

YMG6R4Tsc1





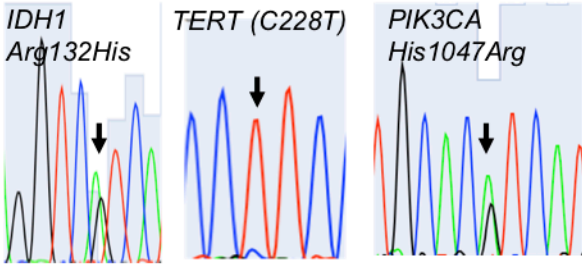
Supplementary Figure 8



# Supplementary Figure 9

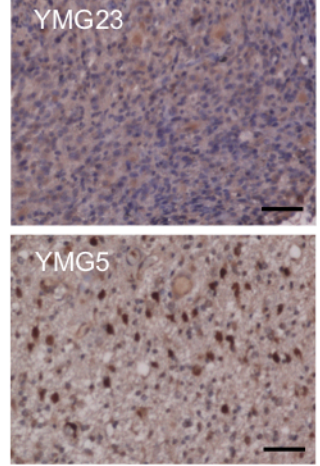
**A**

YMG23



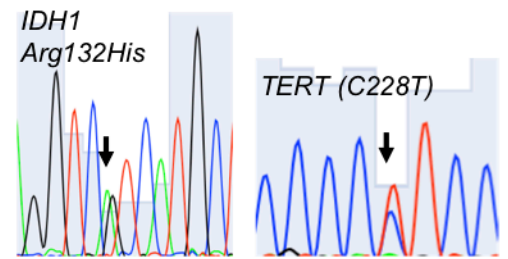
**B**

p16INK4a/CDKN2A



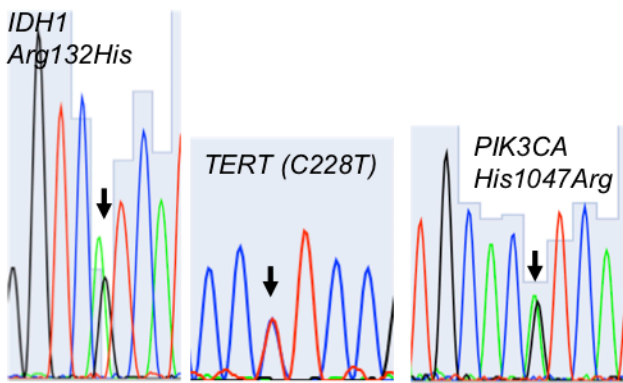
**C**

YMG5



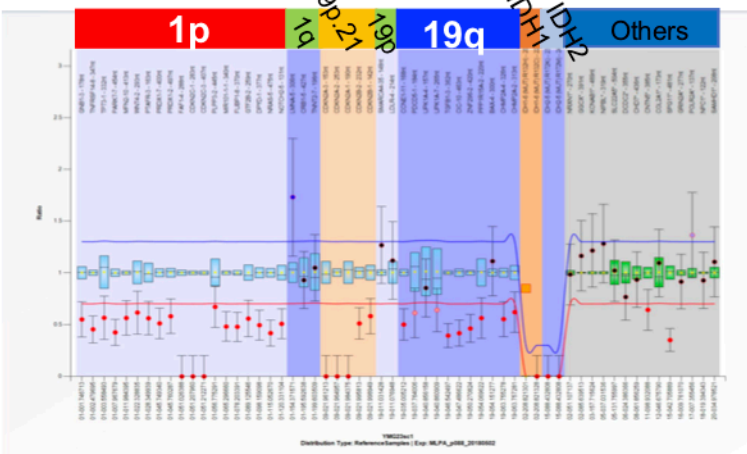
**D**

YMG23 sc1



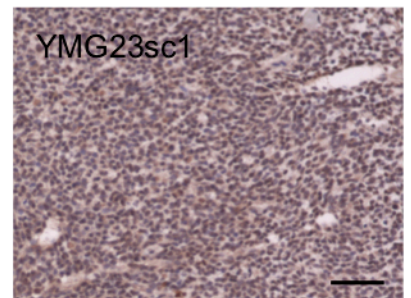
**E**

YMG23sc1



**F**

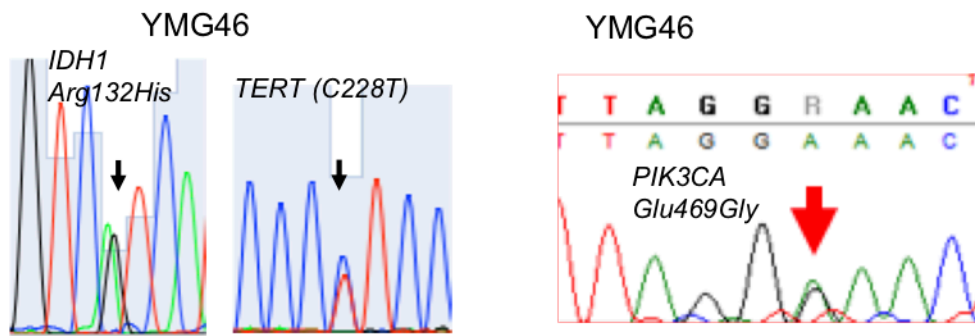
P16INK4a  
CDKN2A



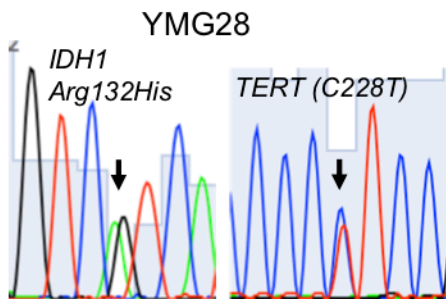


# Supplementary Figure 10

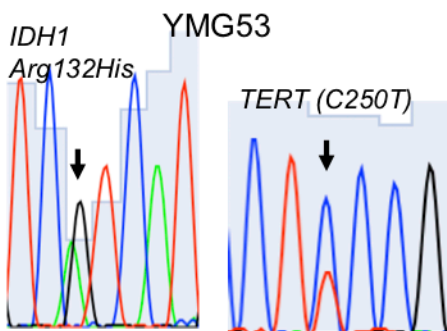
A



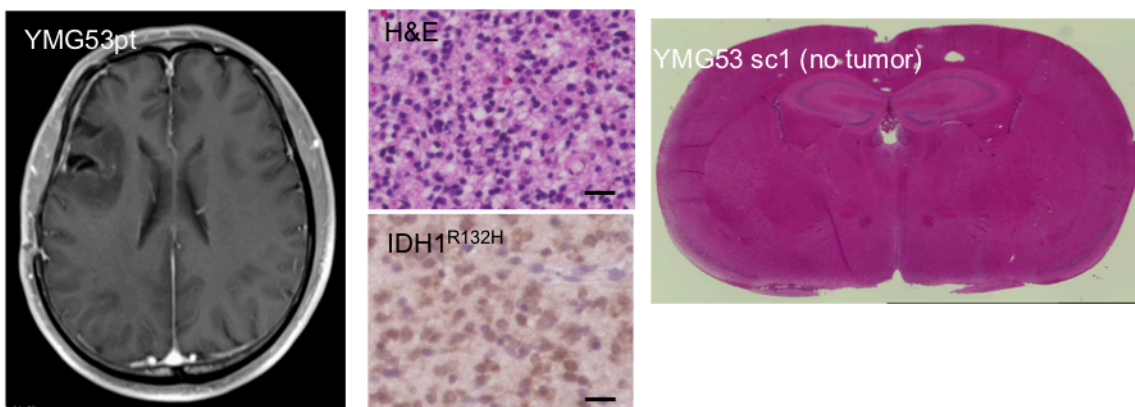
B



C



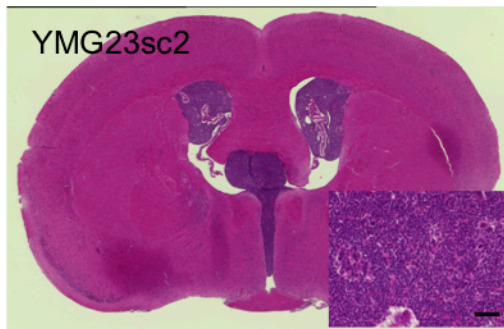
D



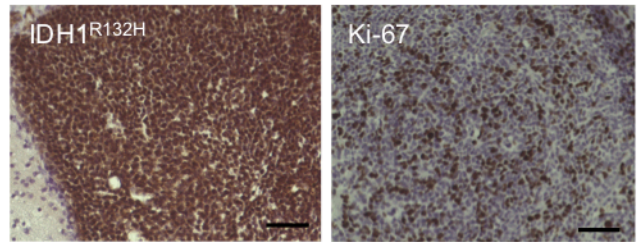


# Supplementary Figure 11

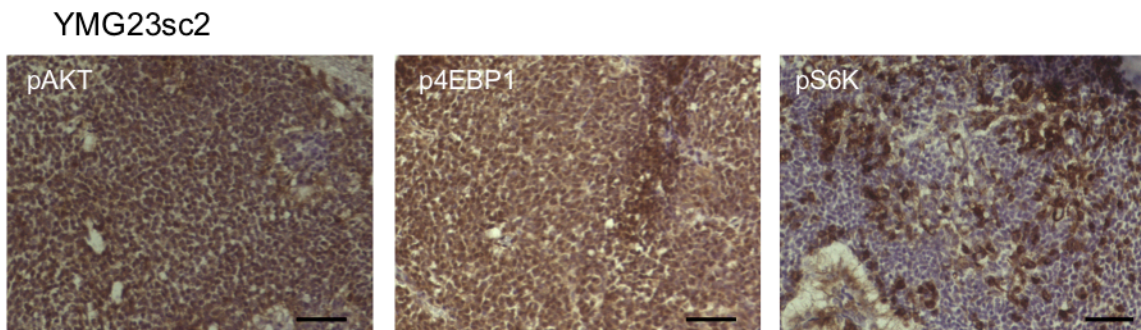
A



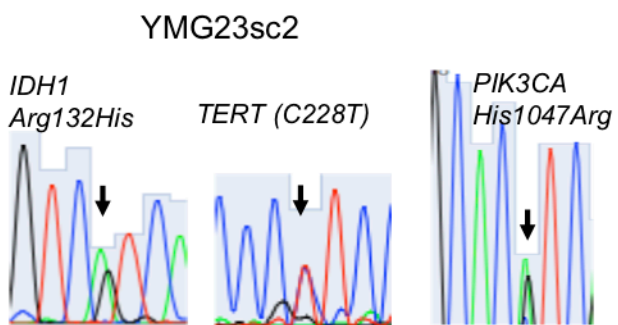
B



C

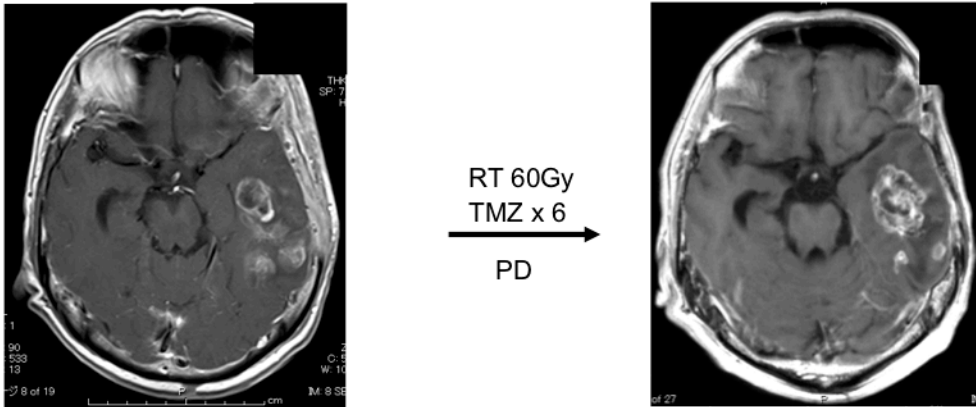


D

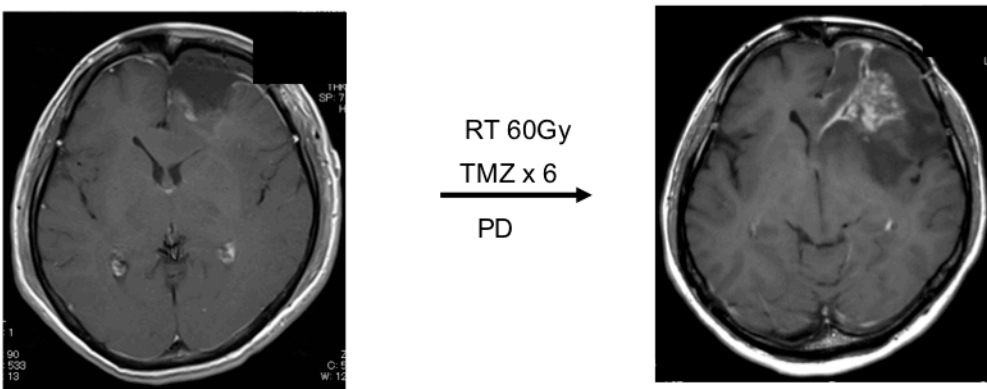


## Supplementary Figure 12

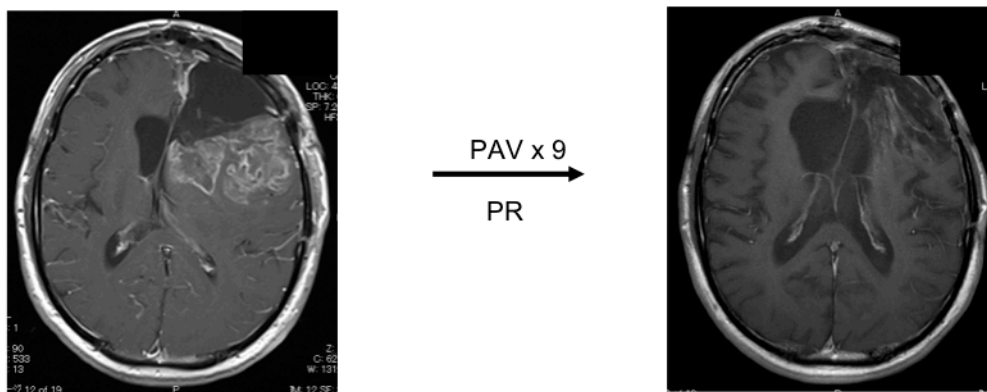
**A** YMG23 (AOD, *MGMT* unmethylated, *PIK3CA*<sup>His1047Arg</sup>)



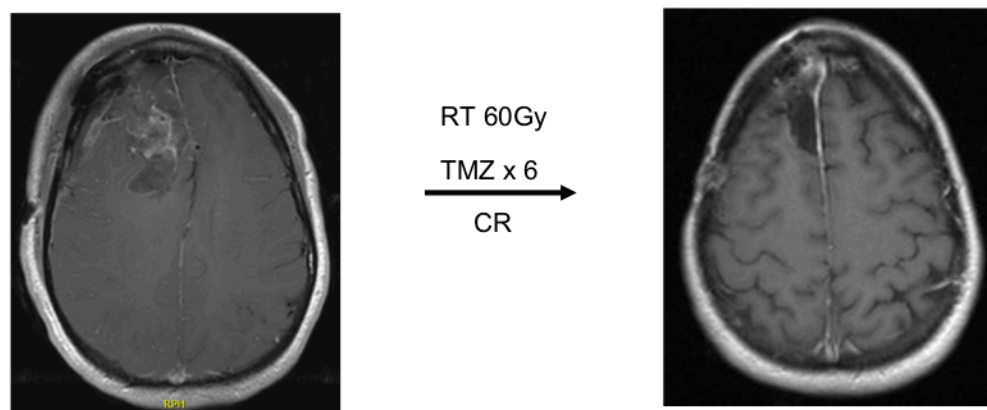
**B** YMG14 (GBM, *IDH* wild-type, *MGMT* unmethylated)



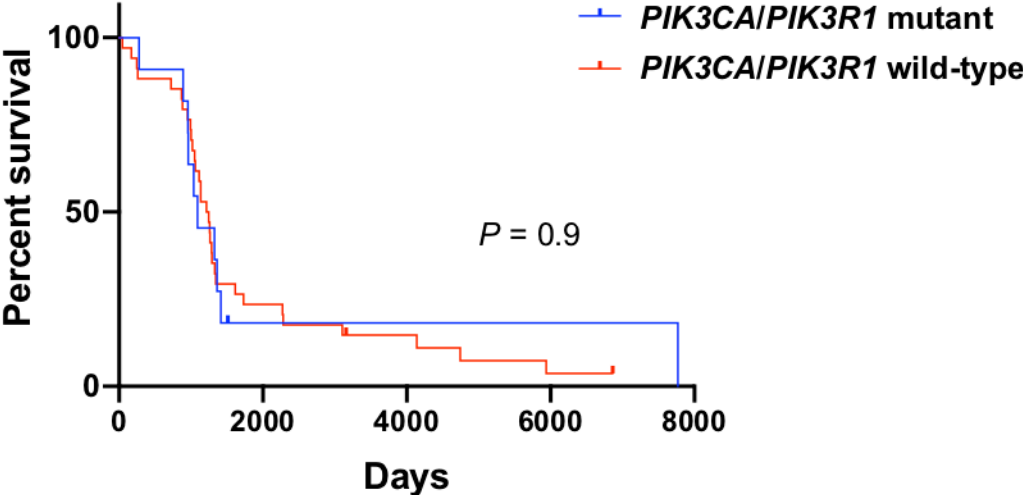
**C** YMG5 (AOD, *MGMT* methylated, *PIK3R1*<sup>Ile57AsnfsTer31</sup>)



**D** MGG137 (AOD, *MGMT* methylated), *mTORSer2215Phe*)



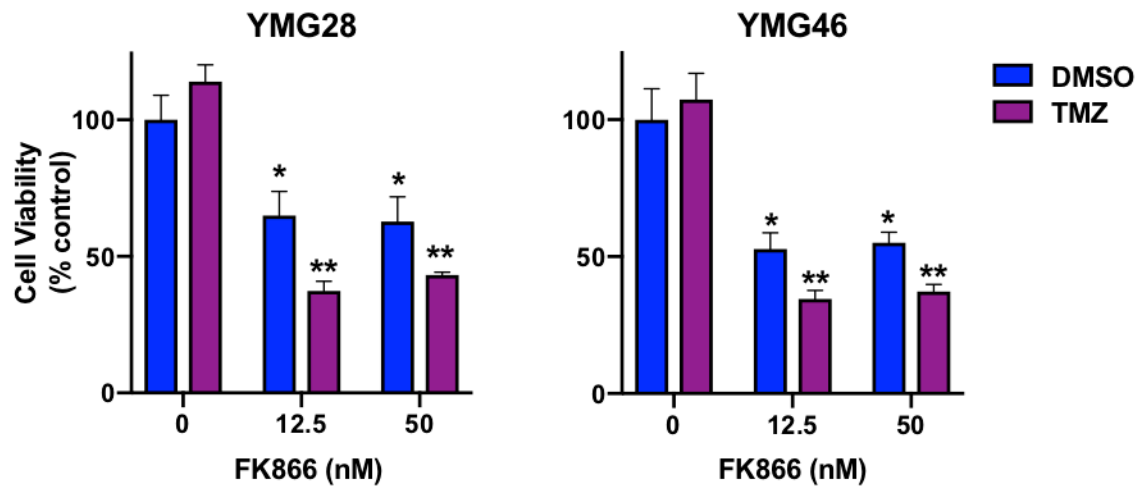
Supplementary Figure 13





# Supplementary Figure 14

A



B

