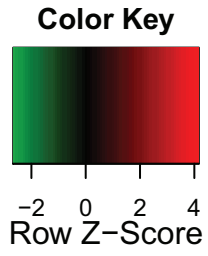
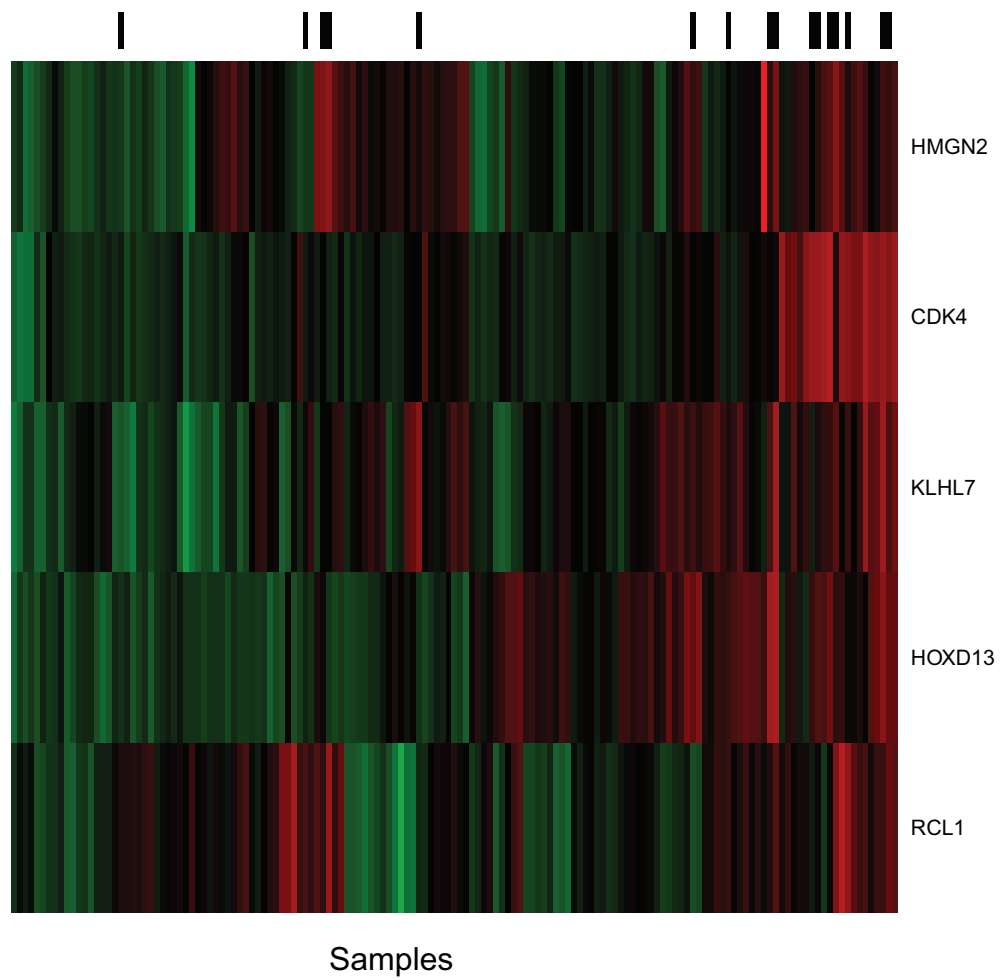


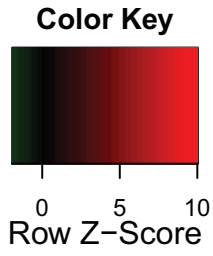
## Supplementary Heatmaps:

This supplementary document contains heatmaps for each of the 41 genes whose mutation status was correlated with the drastic over- and under-expression of other genes. Each page of this document contains: a single heatmap (plotted expressed genes  $\times$  samples) with a title indicating the hugo symbol for the mutated gene; the sample-dependent mutation status plotted along the top of the heatmap (black bar indicates that sample is mutated in said gene); the hugo symbol for each expressed gene; a color legend for the magnitude and direction of correlation. Note: some heatmaps contain many expressed genes and therefore the hugo symbols are illegible—for this reason the reader is encouraged to use the accompanying spreadsheet *Supplementary Mutation-correlated expression* available in the online supplement.

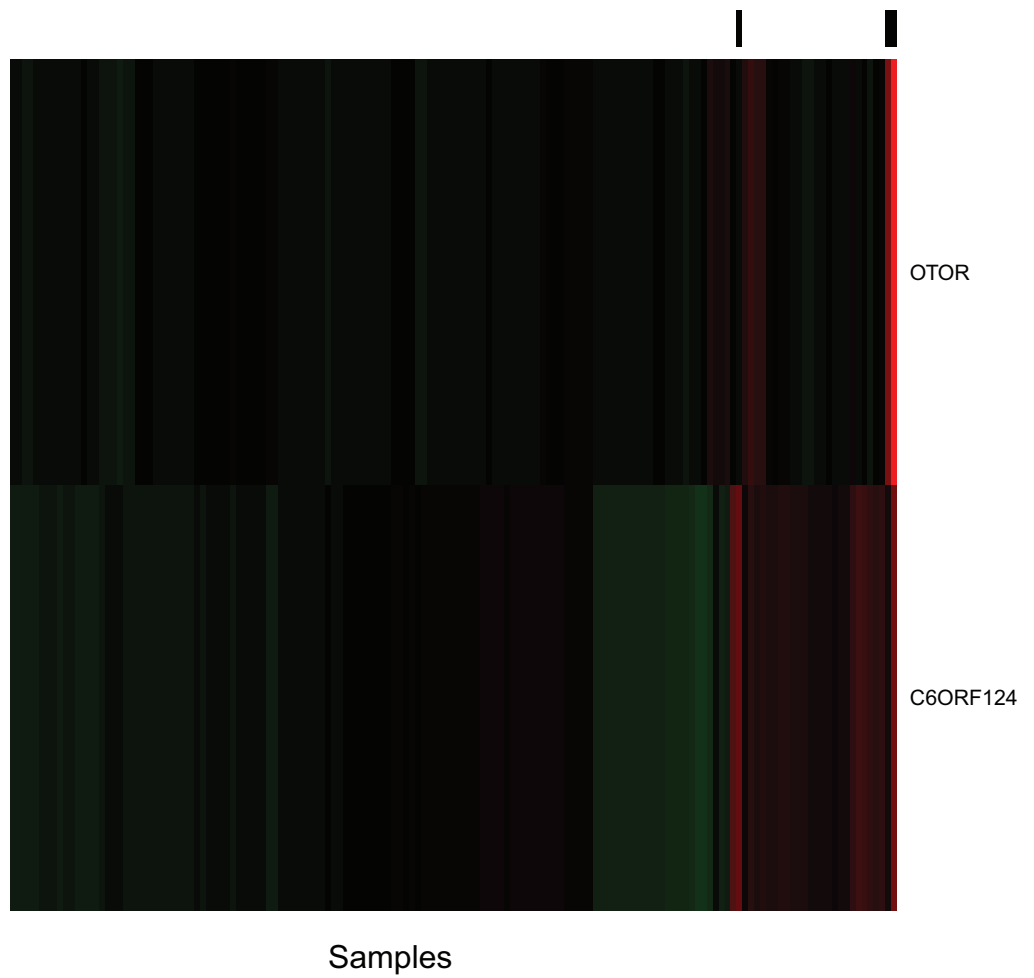


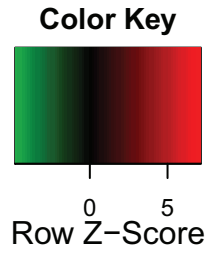
# AKR1C3 Mutations



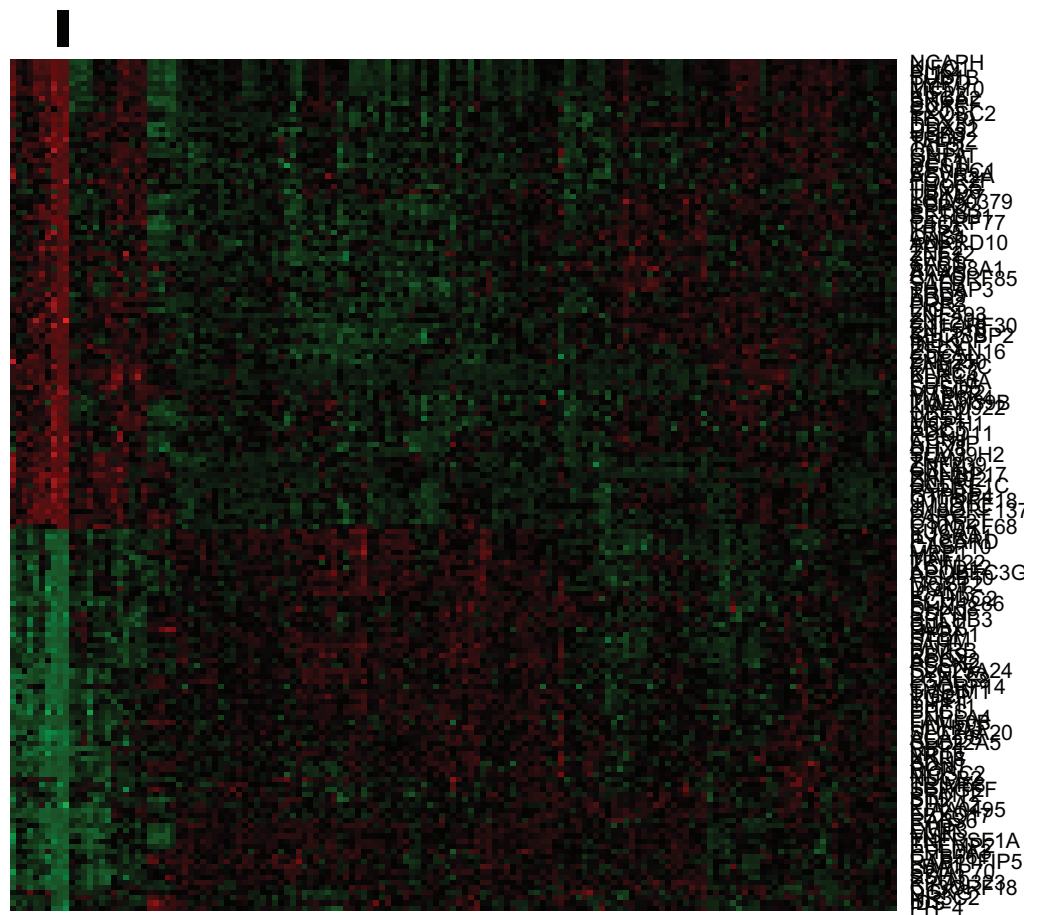


# ANK1 Mutations

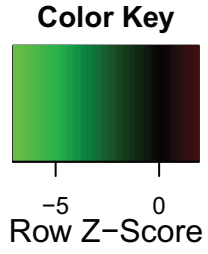




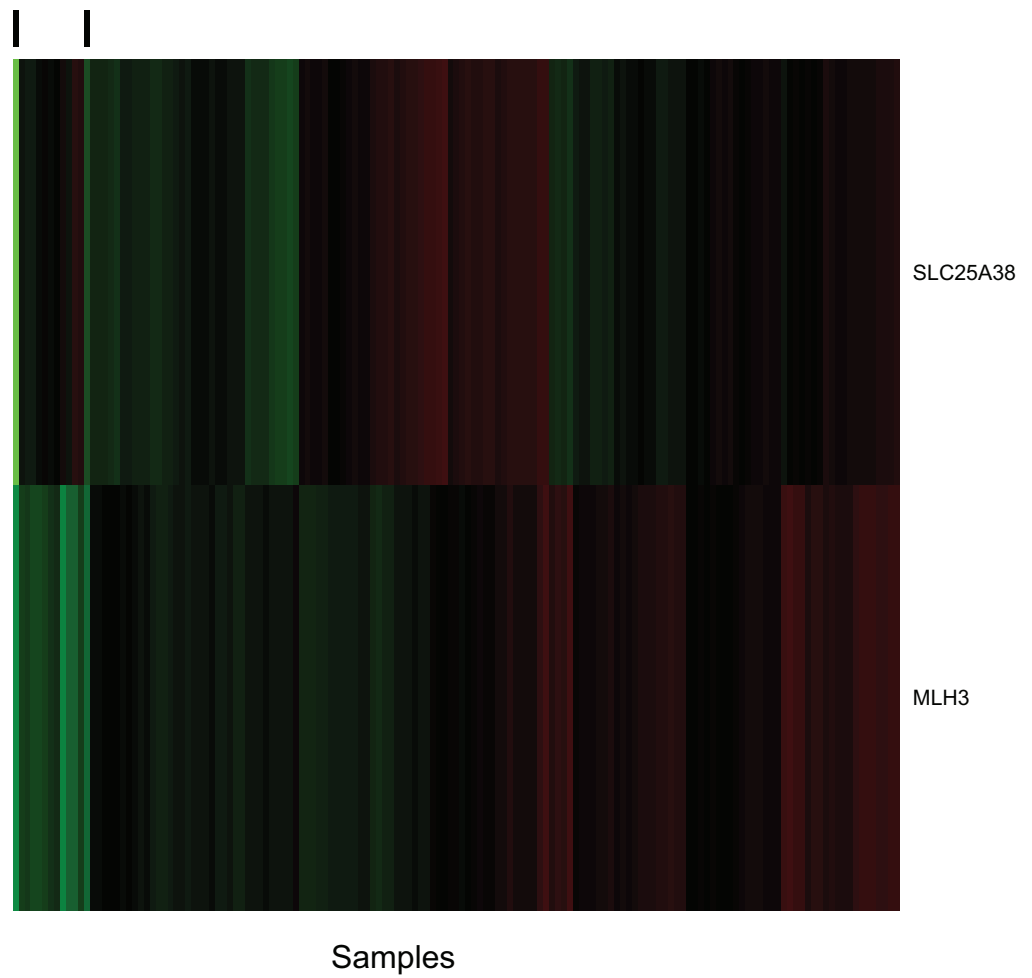
# ATM Mutations

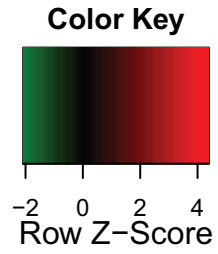


Samples

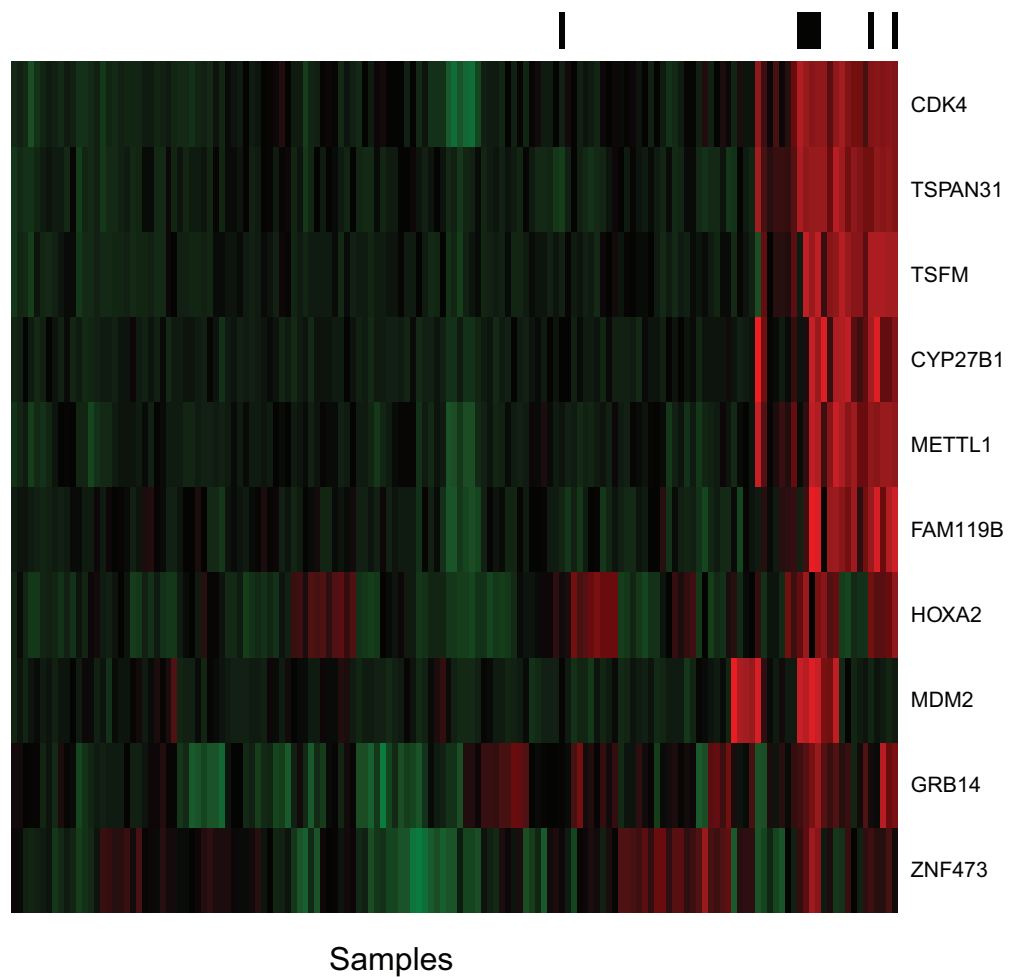


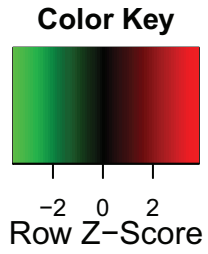
# CHL1 Mutations



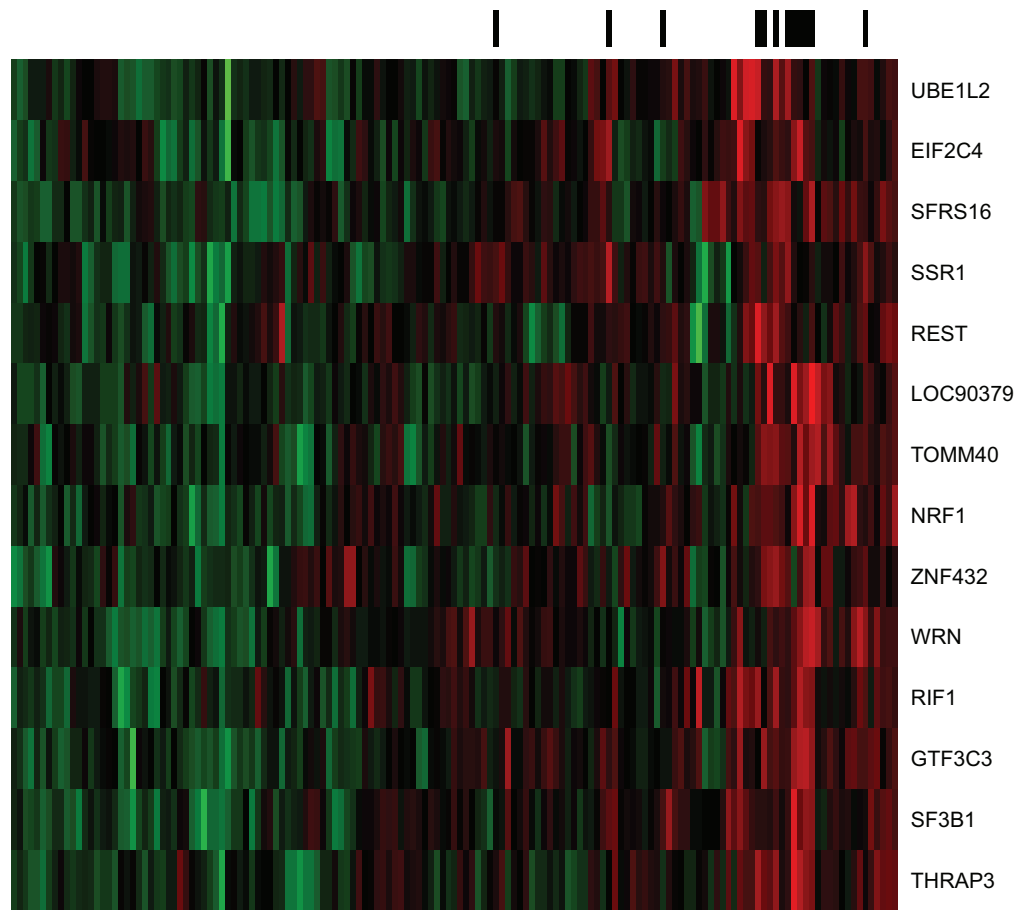


# ConsReg523 Mutations

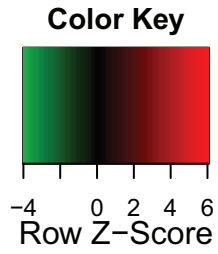




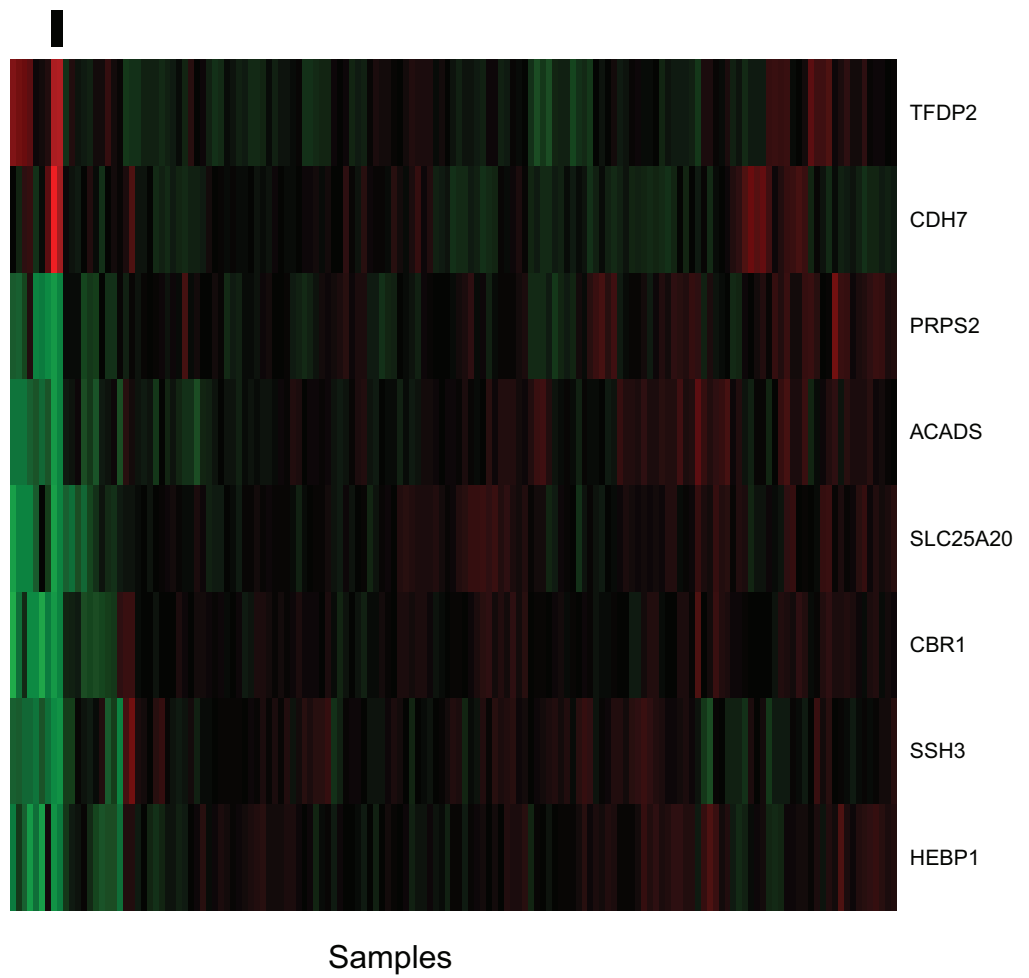
# DST Mutations



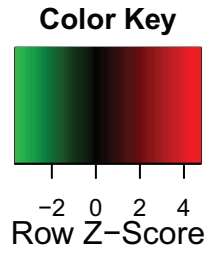
Samples



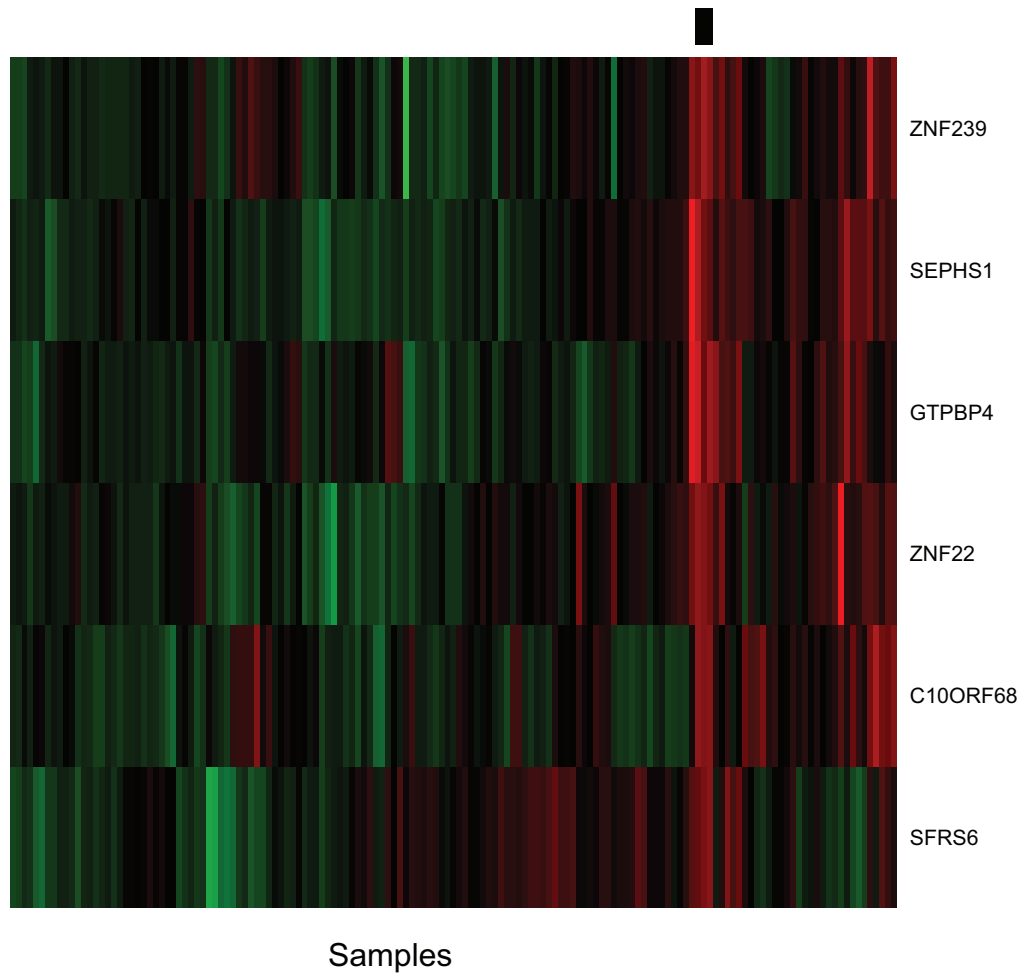
# EP300 Mutations

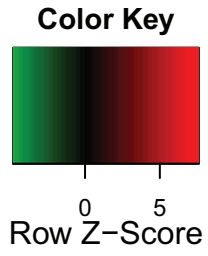




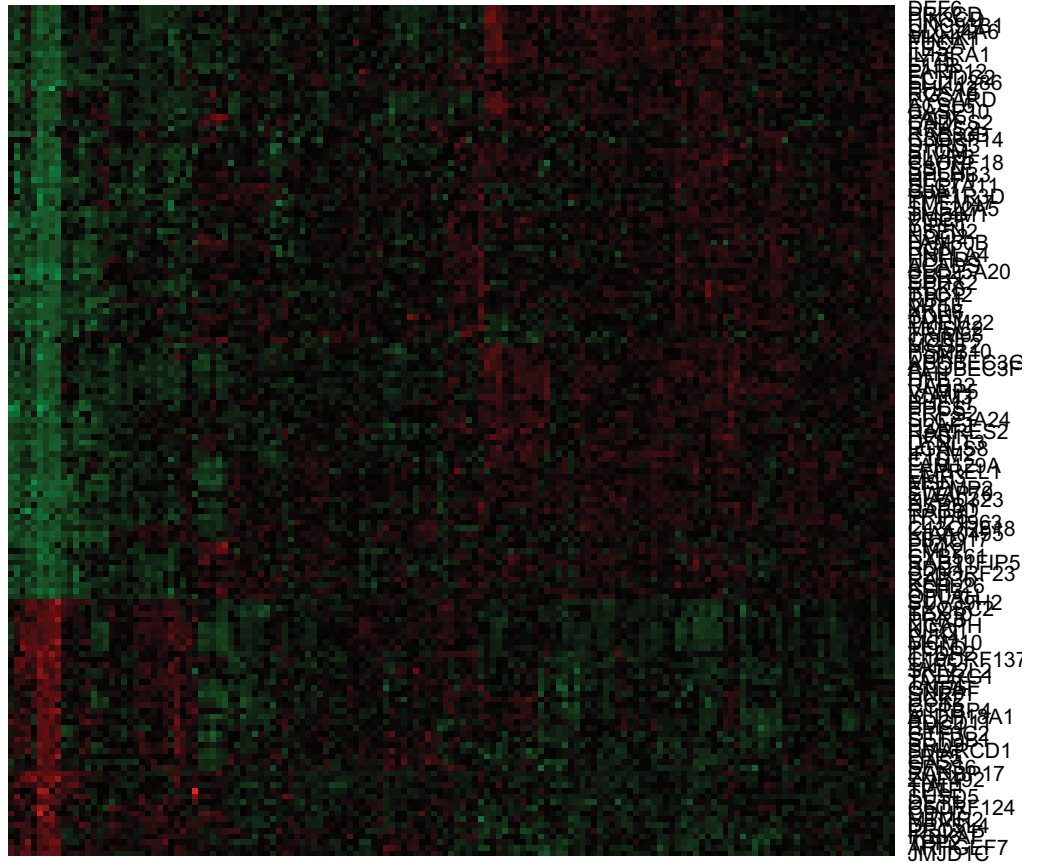


# EP400 Mutations

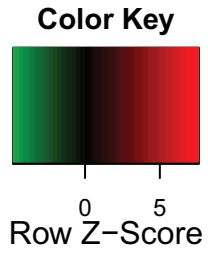




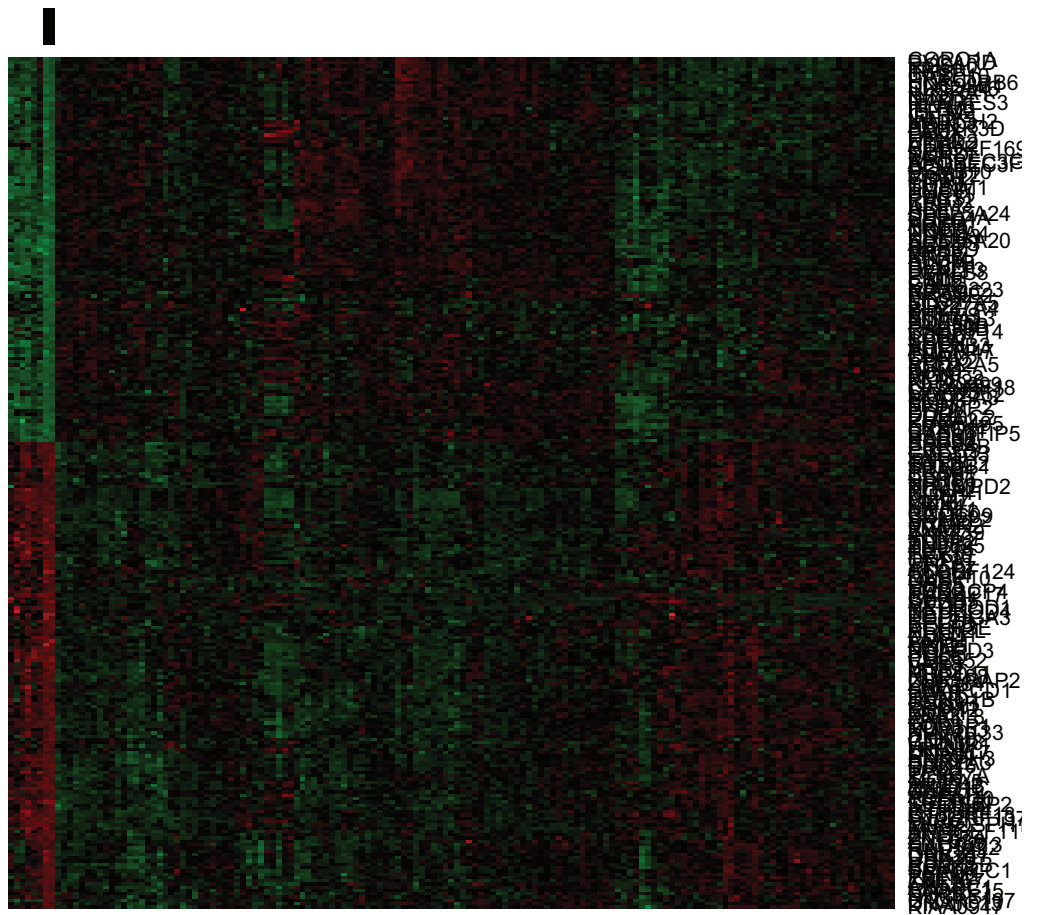
# EPHB4 Mutations



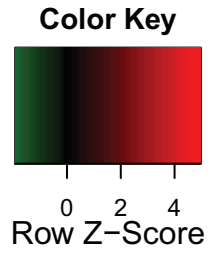
Samples



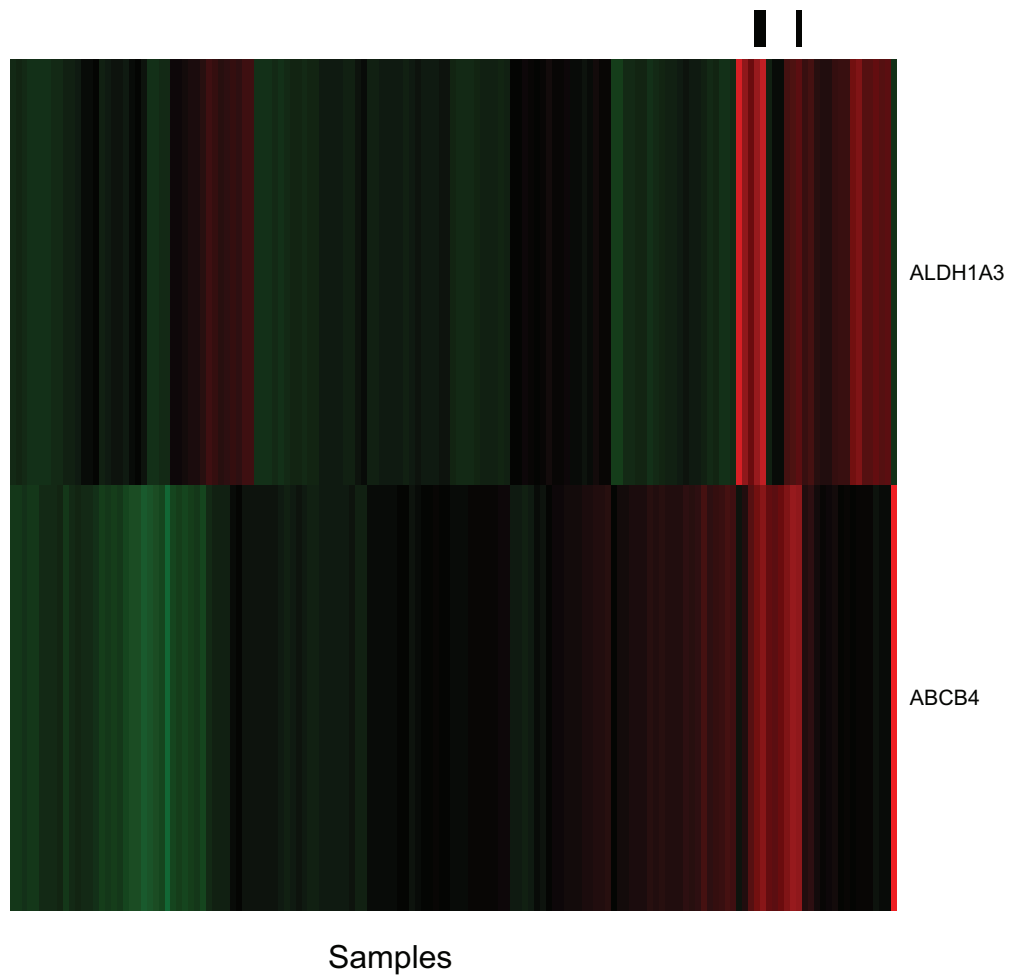
# FBXW7 Mutations

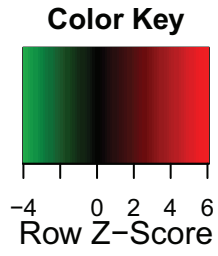


Samples

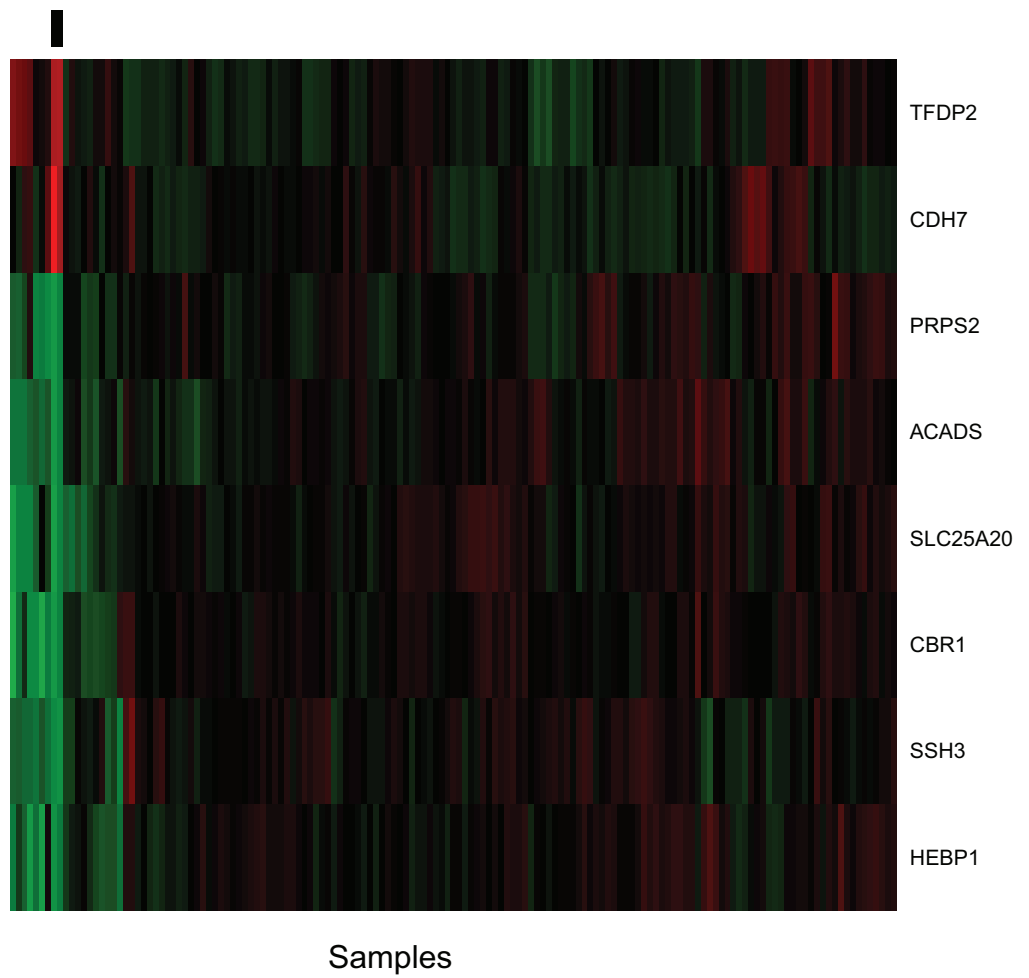


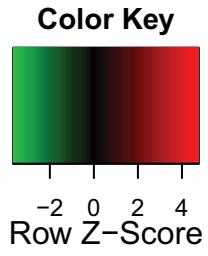
# FGFR1 Mutations



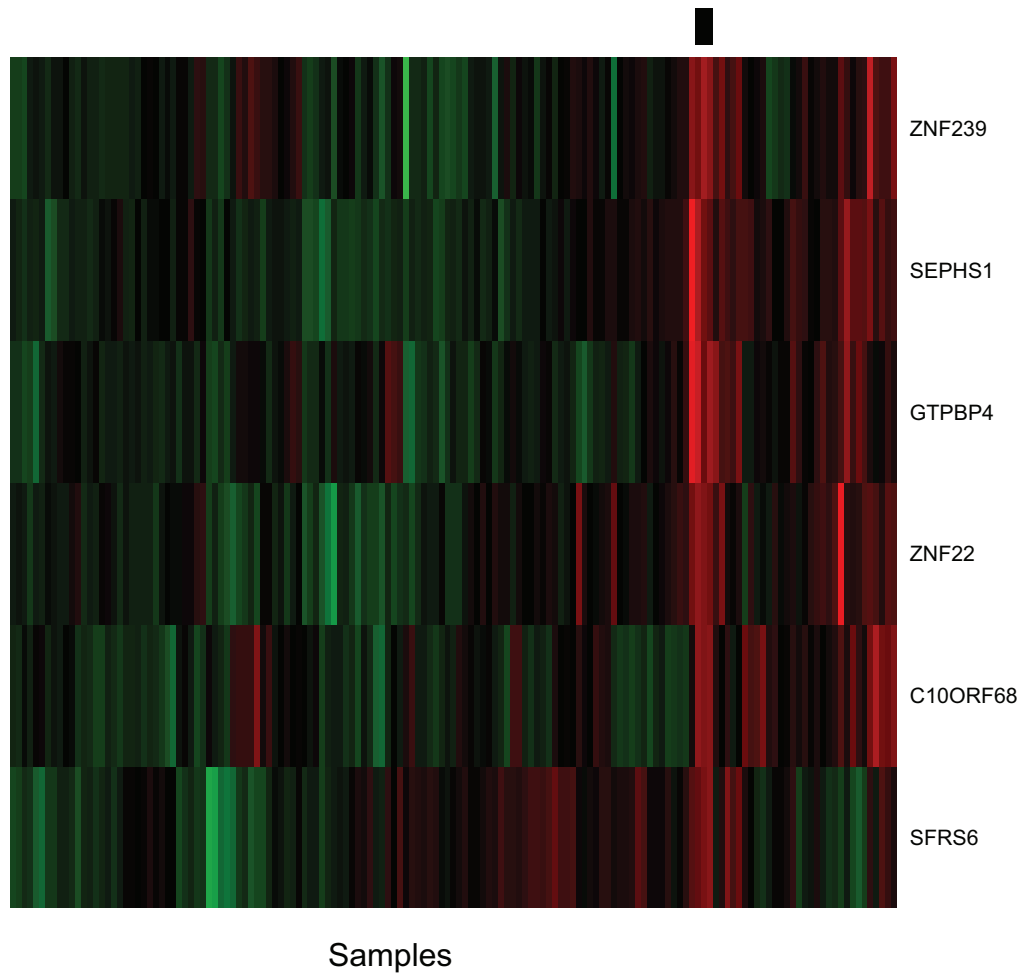


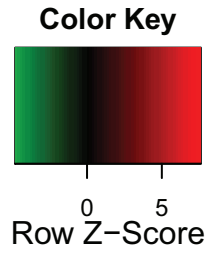
# FGFR4 Mutations



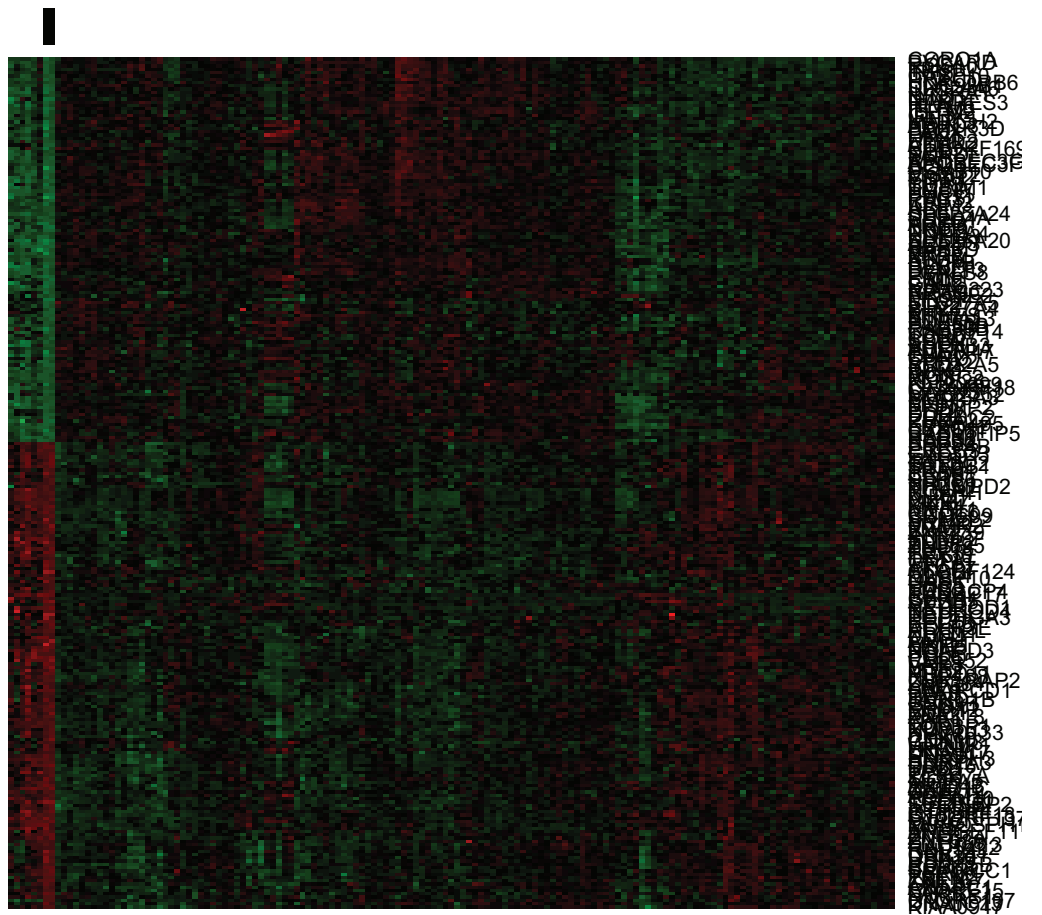


# FN1 Mutations

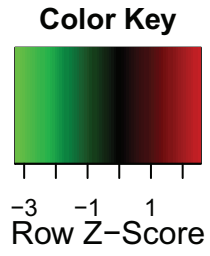




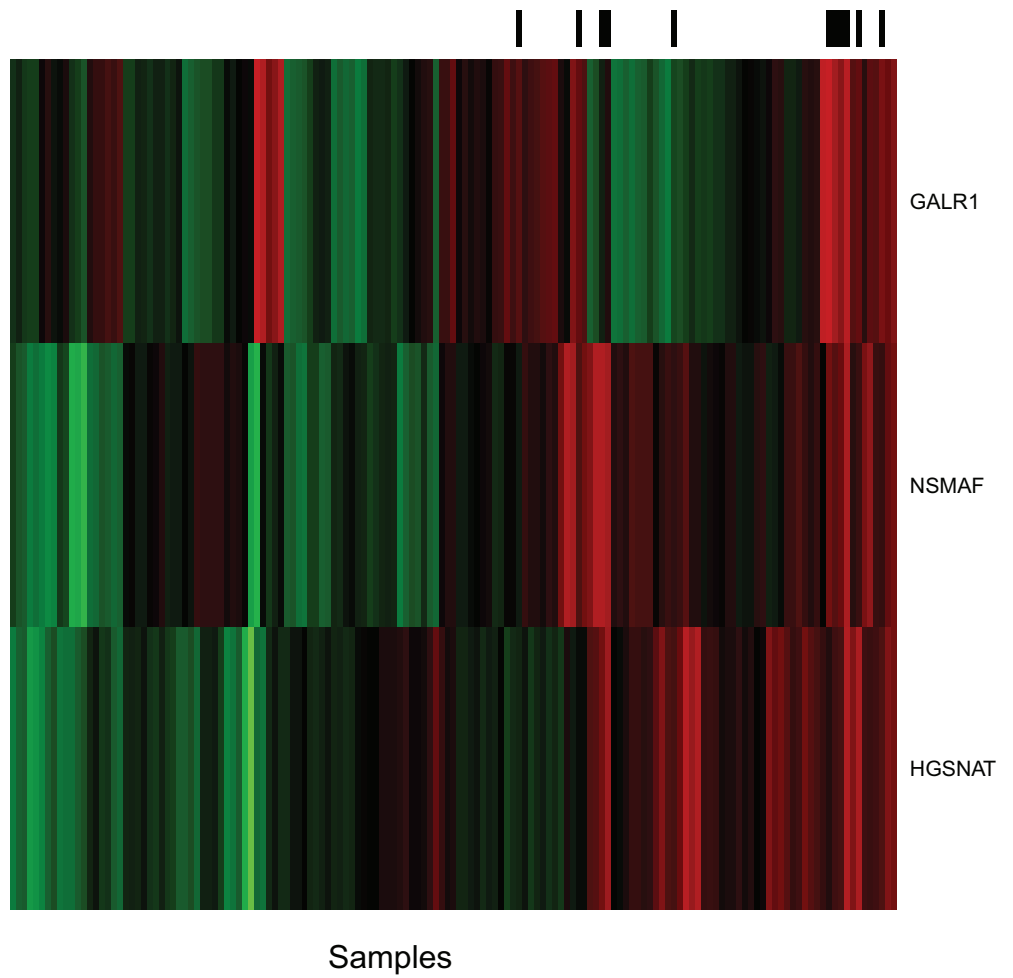
# FURIN Mutations



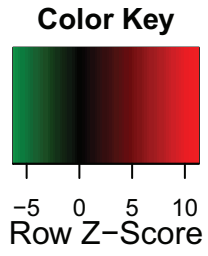
Samples



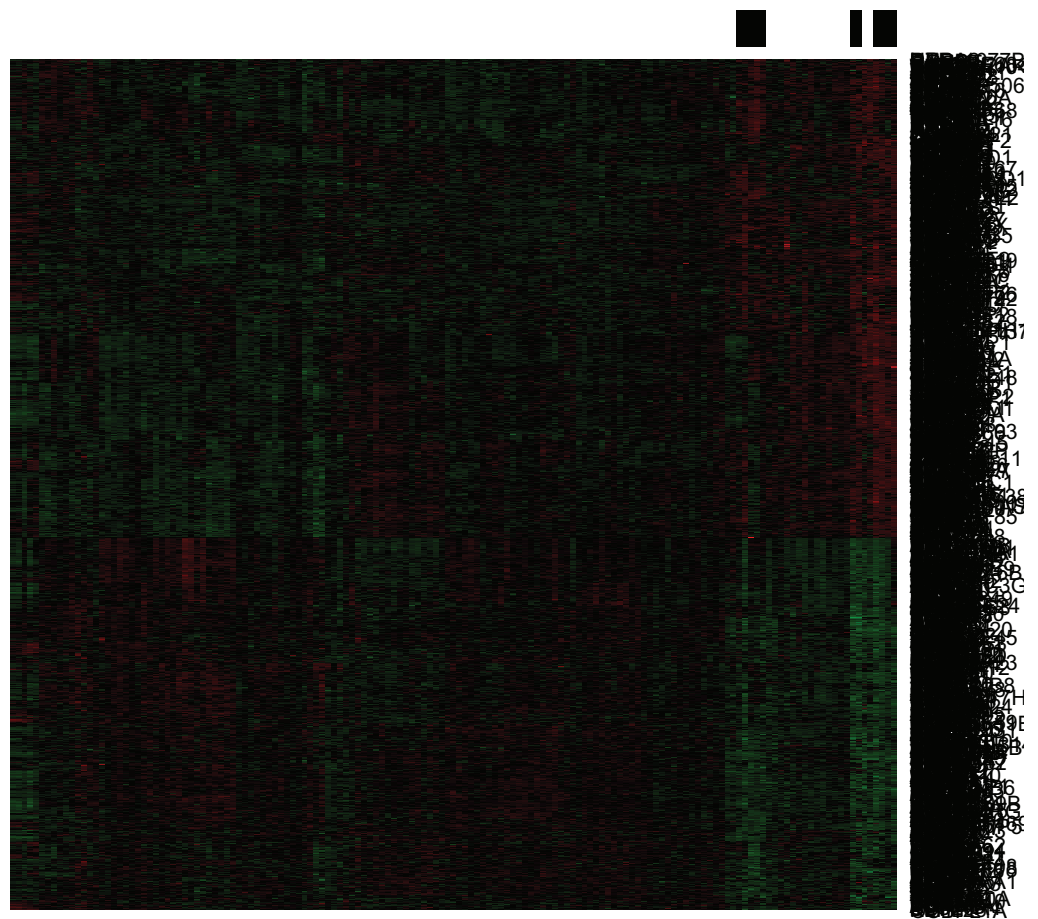
# HPN Mutations



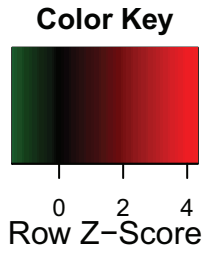




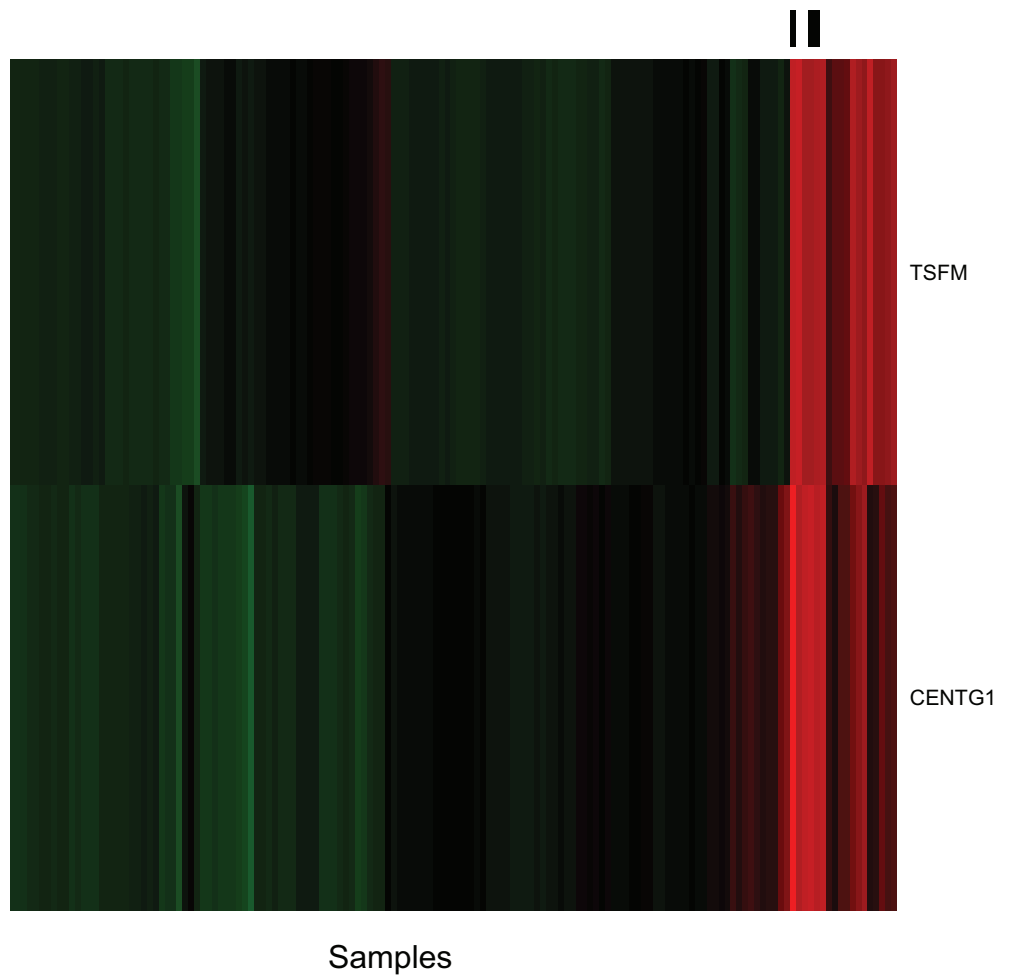
# IDH1 Mutations

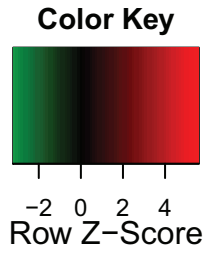


Samples

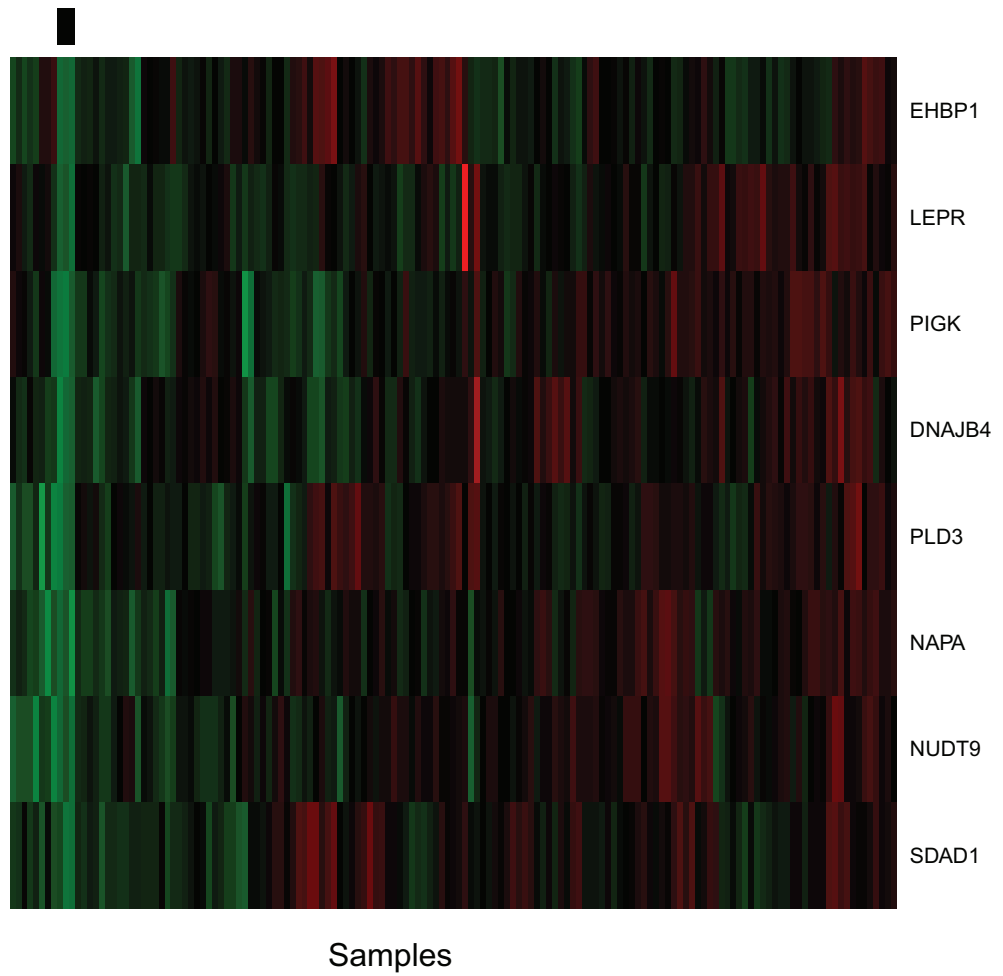


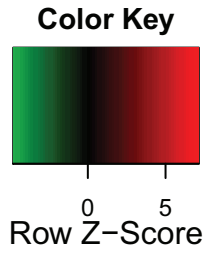
# INHBC Mutations



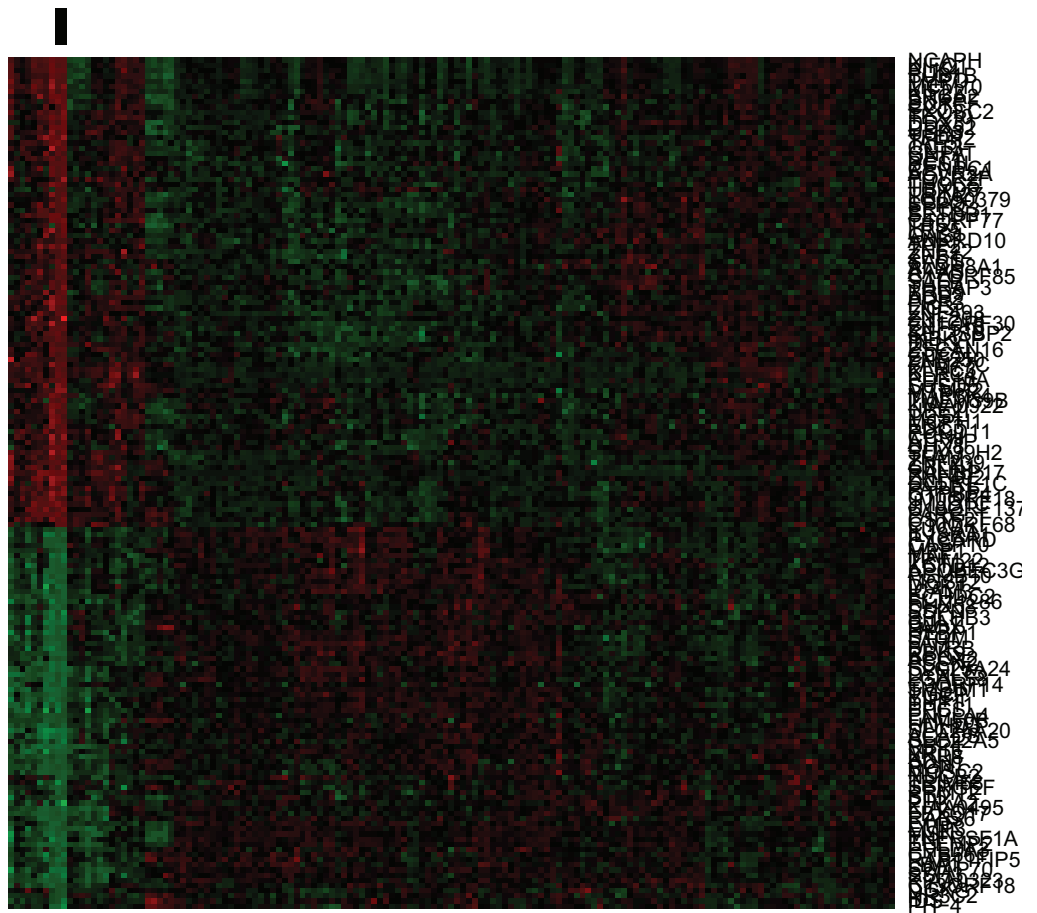


# KCNG1 Mutations

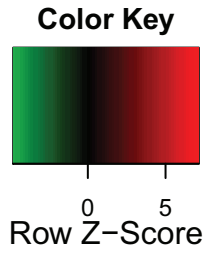




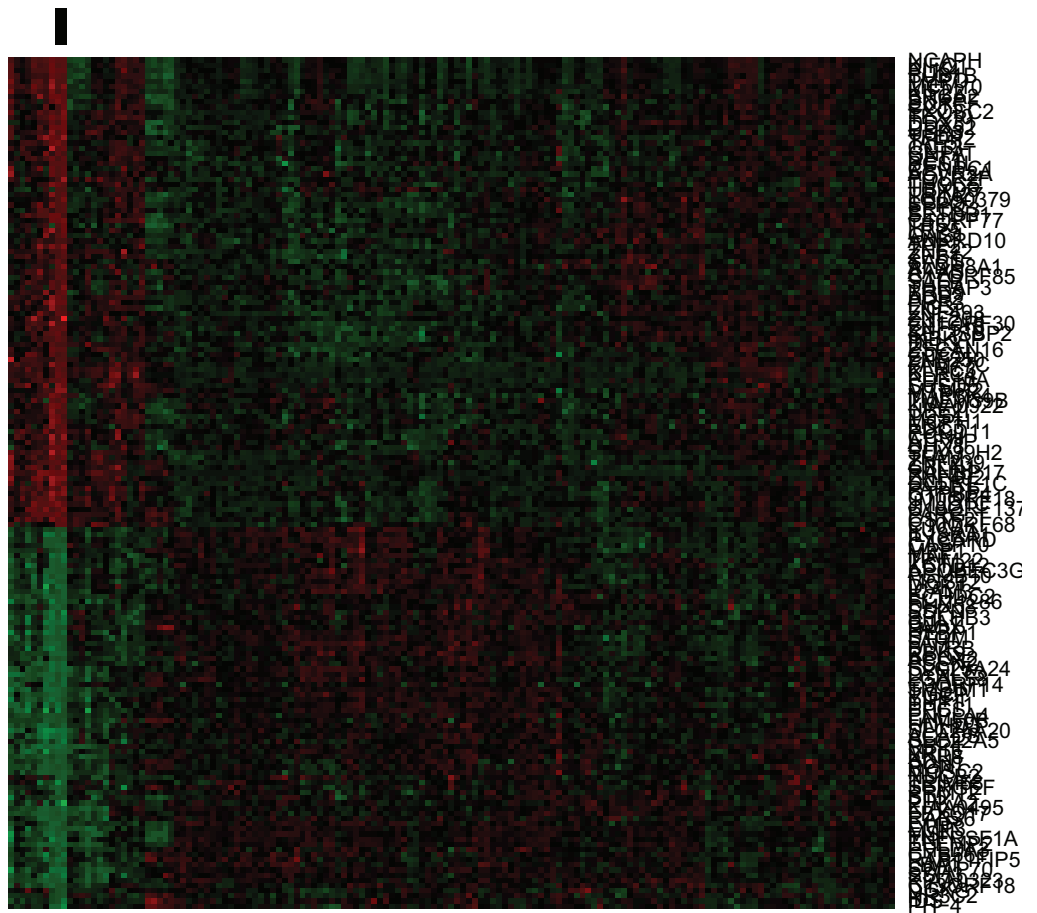
# KLF6 Mutations



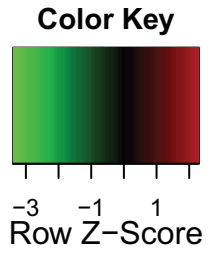
Samples



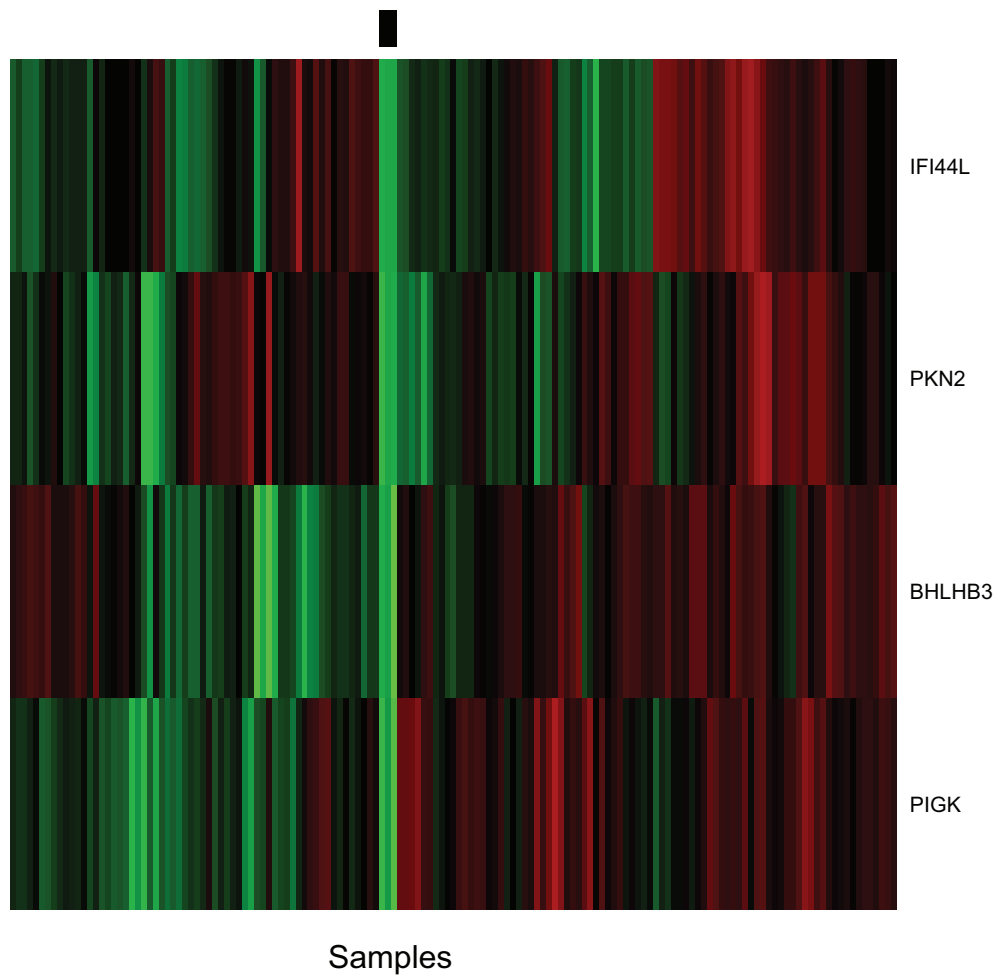
# LEMD3 Mutations

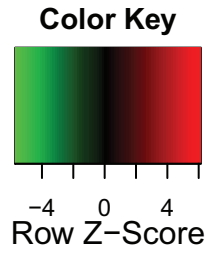


Samples

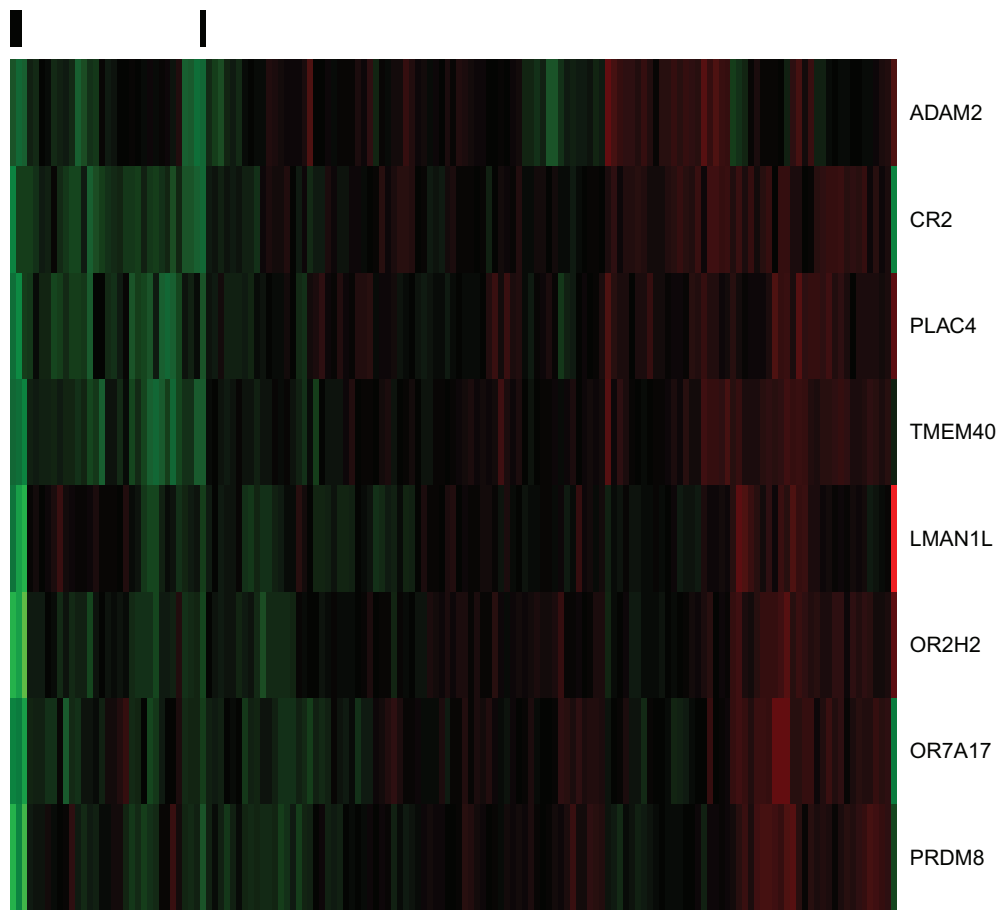


# LGALS3BP Mutations

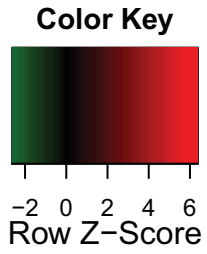




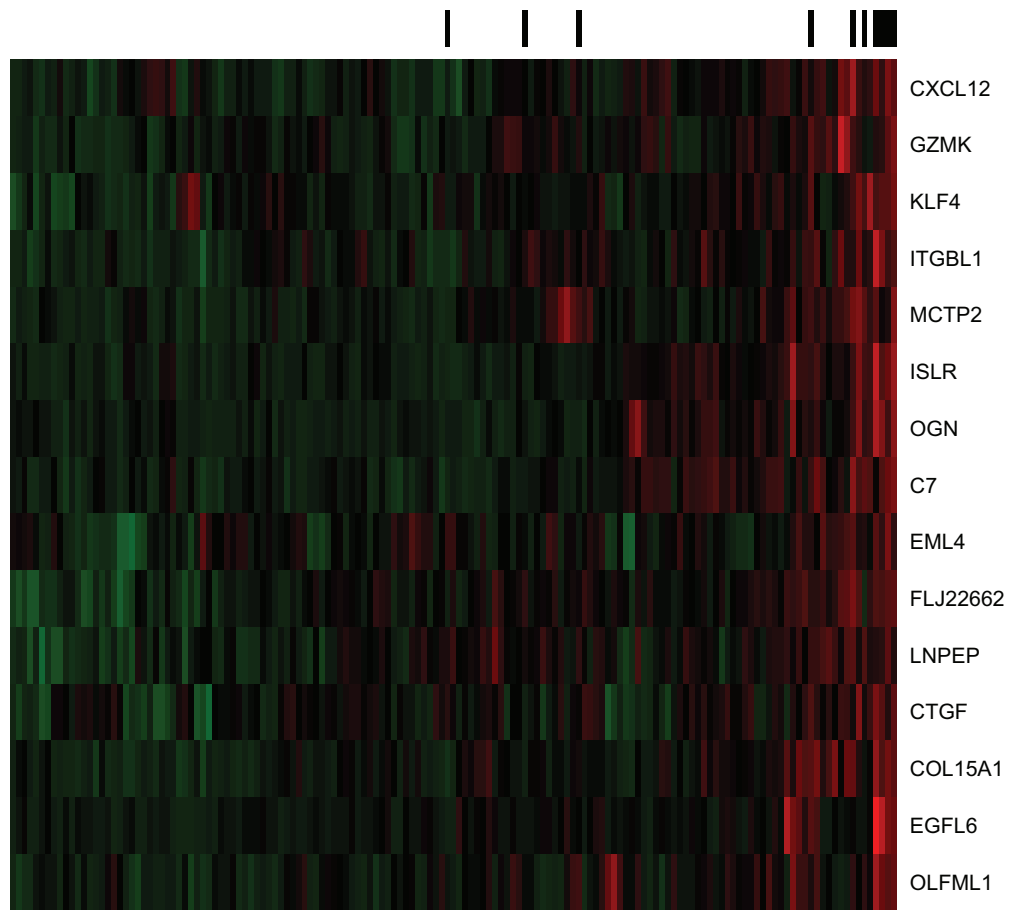
# LUM Mutations



Samples



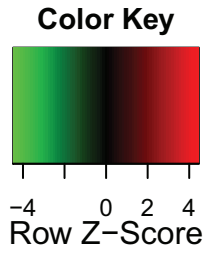
# MADD Mutations



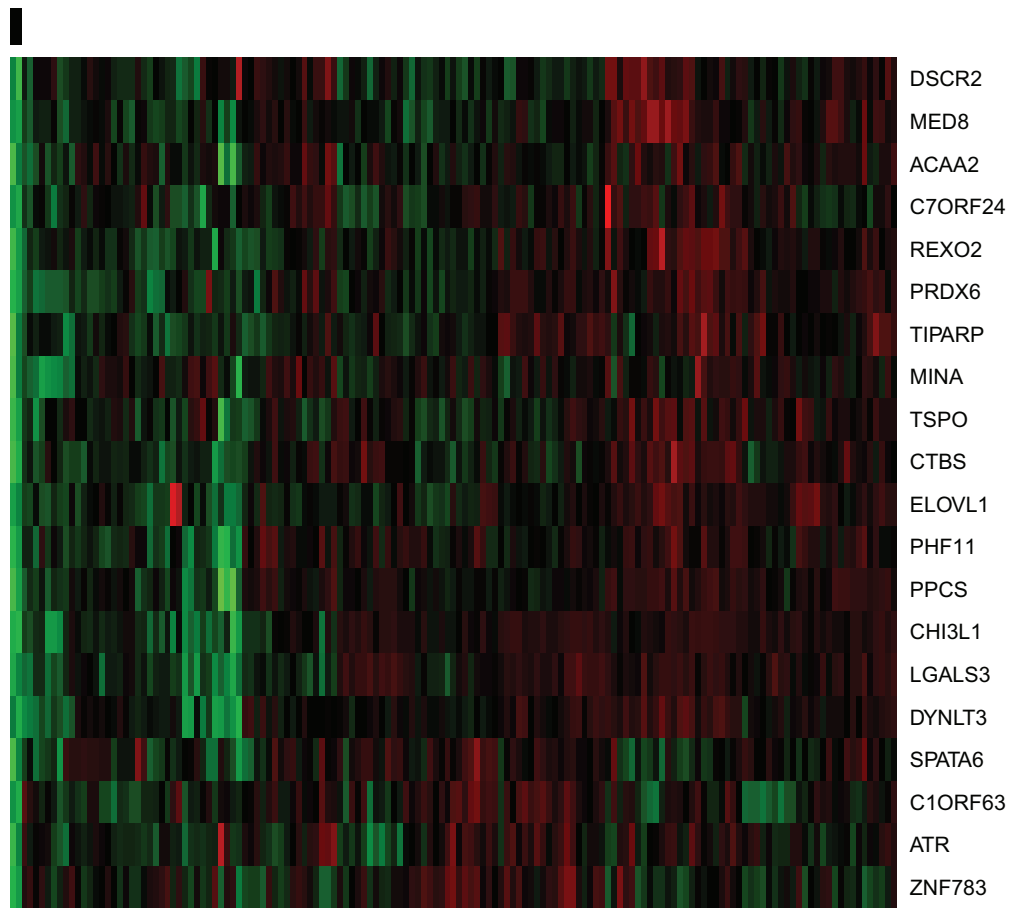
Samples



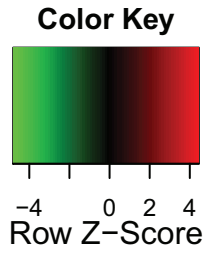




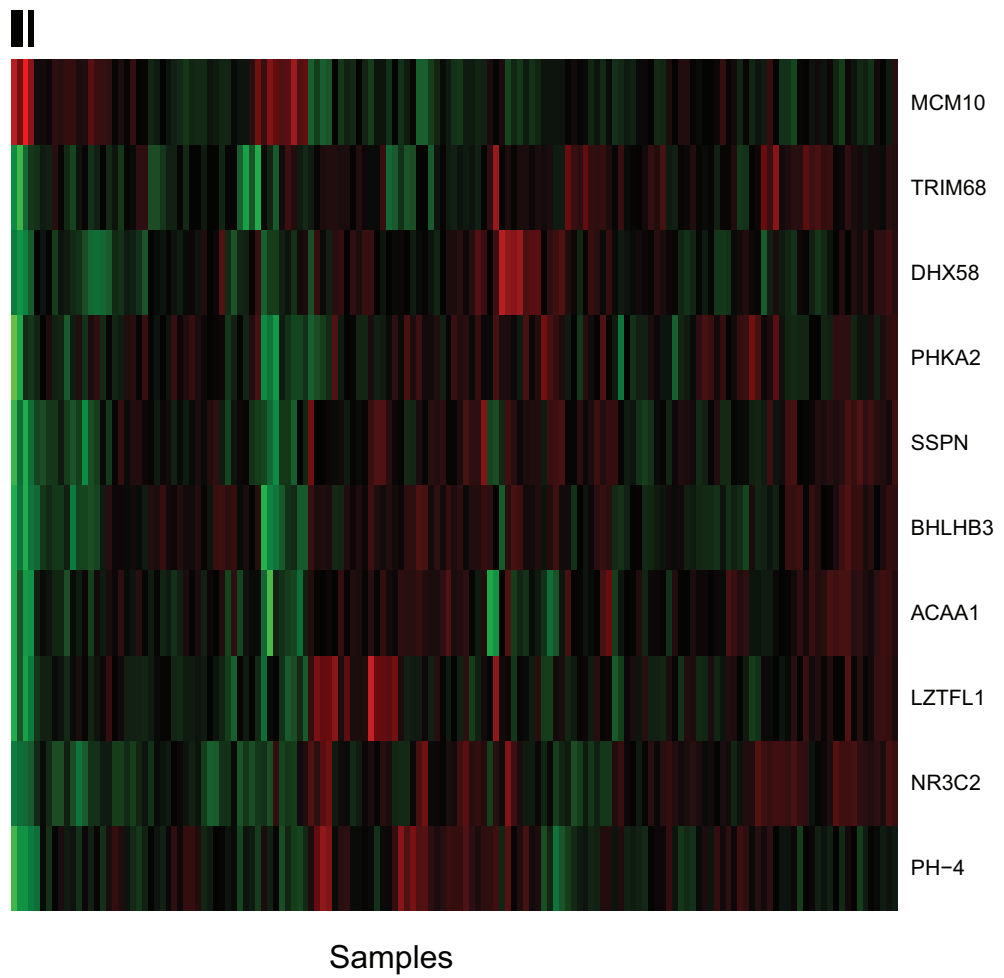
# MARK1 Mutations

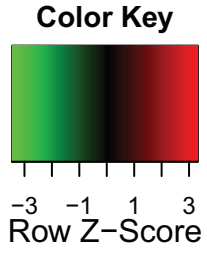


Samples

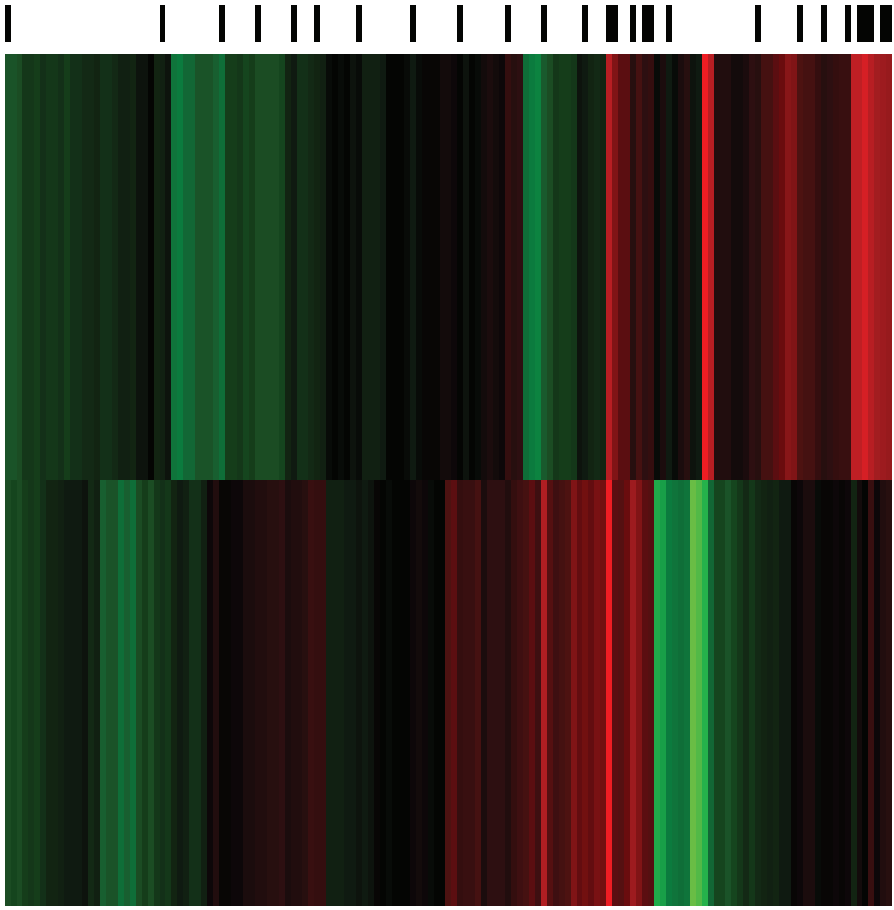


# MET Mutations





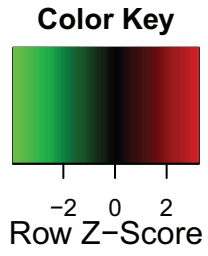
# MKI67 Mutations



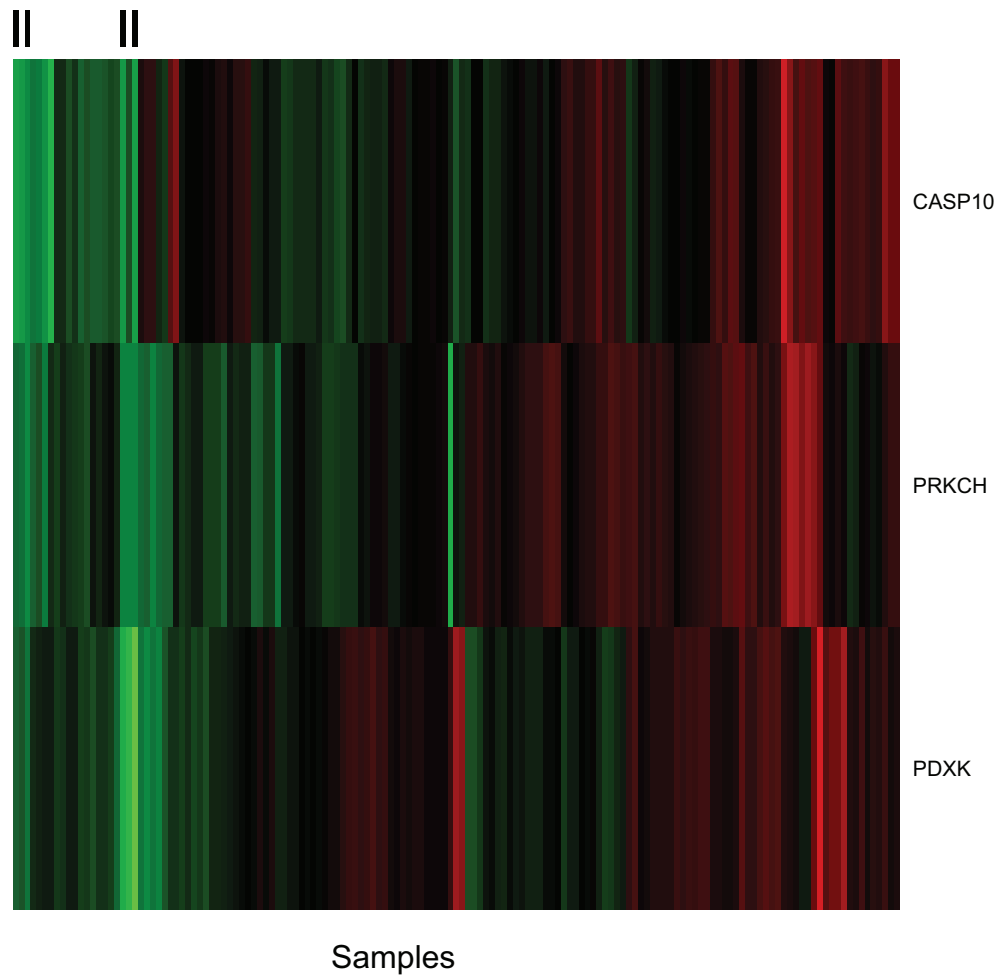
RAMP2

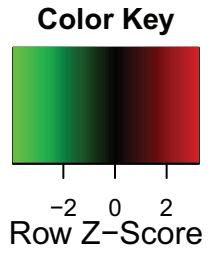
UNC84A

Samples

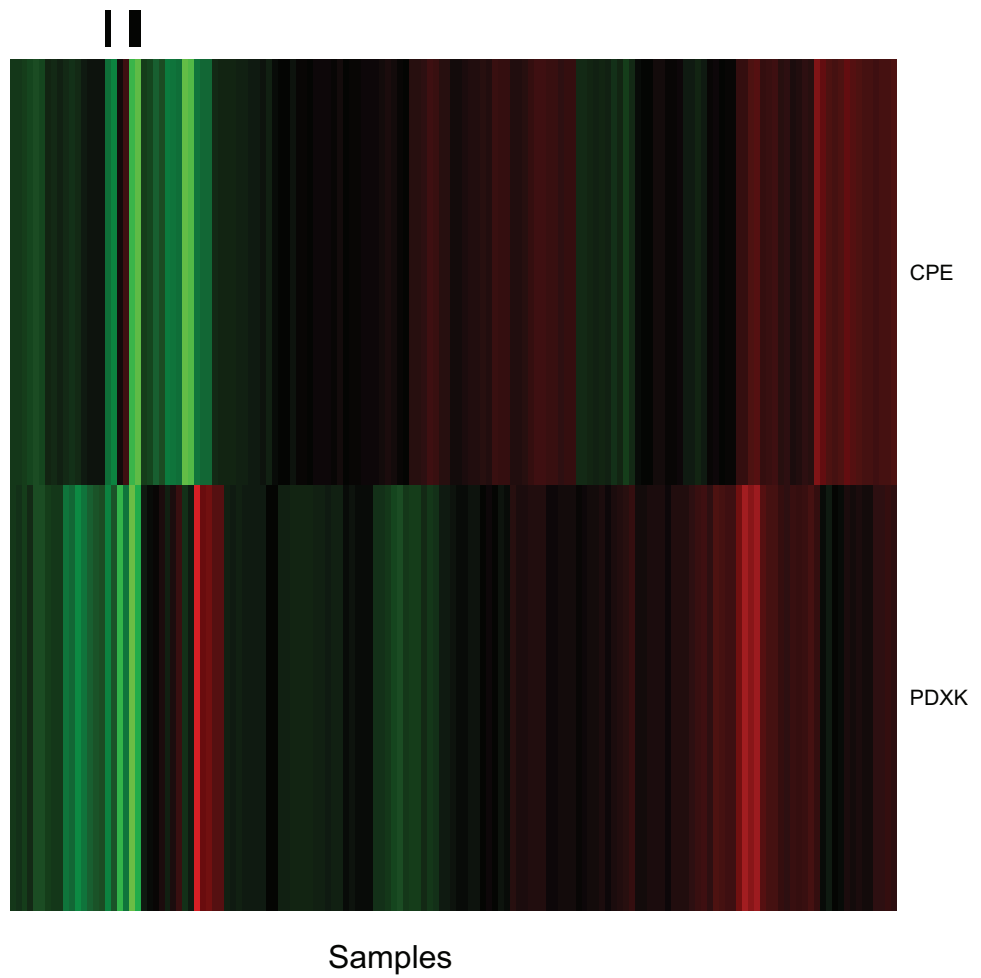


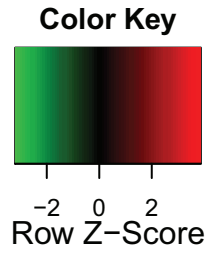
# MSH6 Mutations



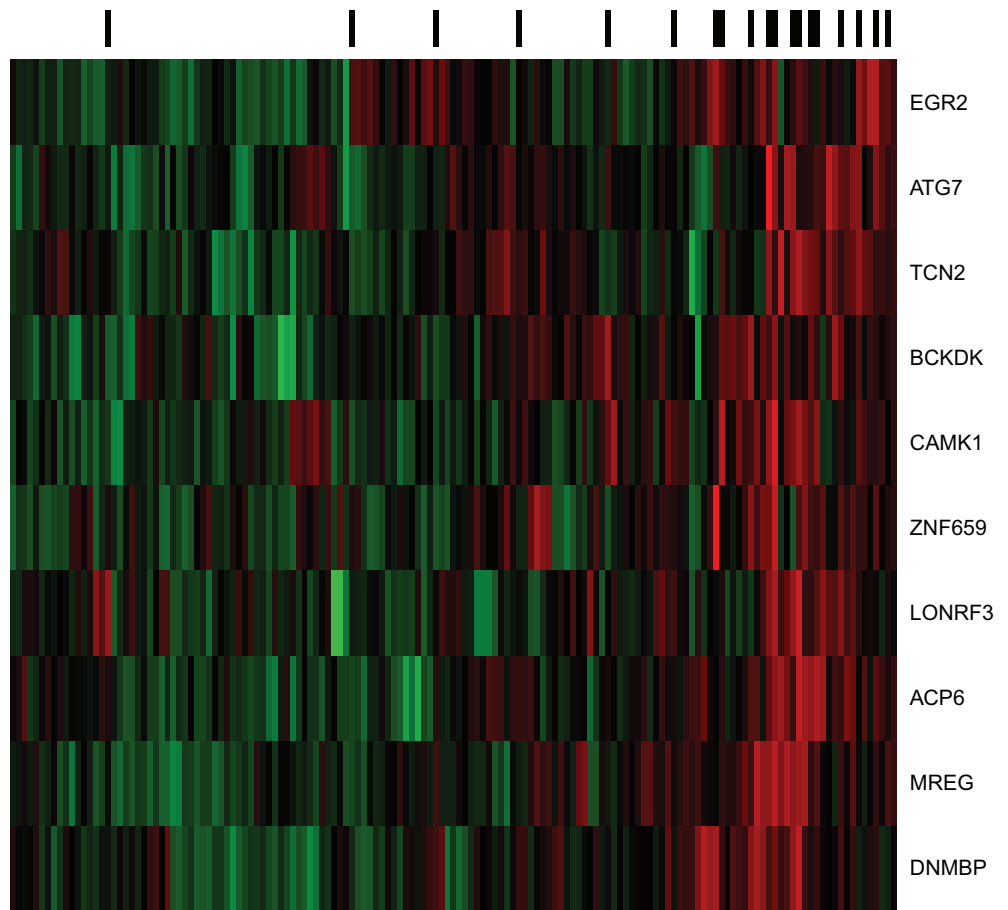


# MYST4 Mutations

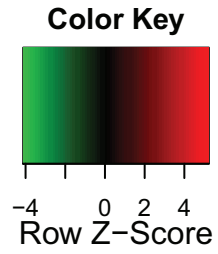




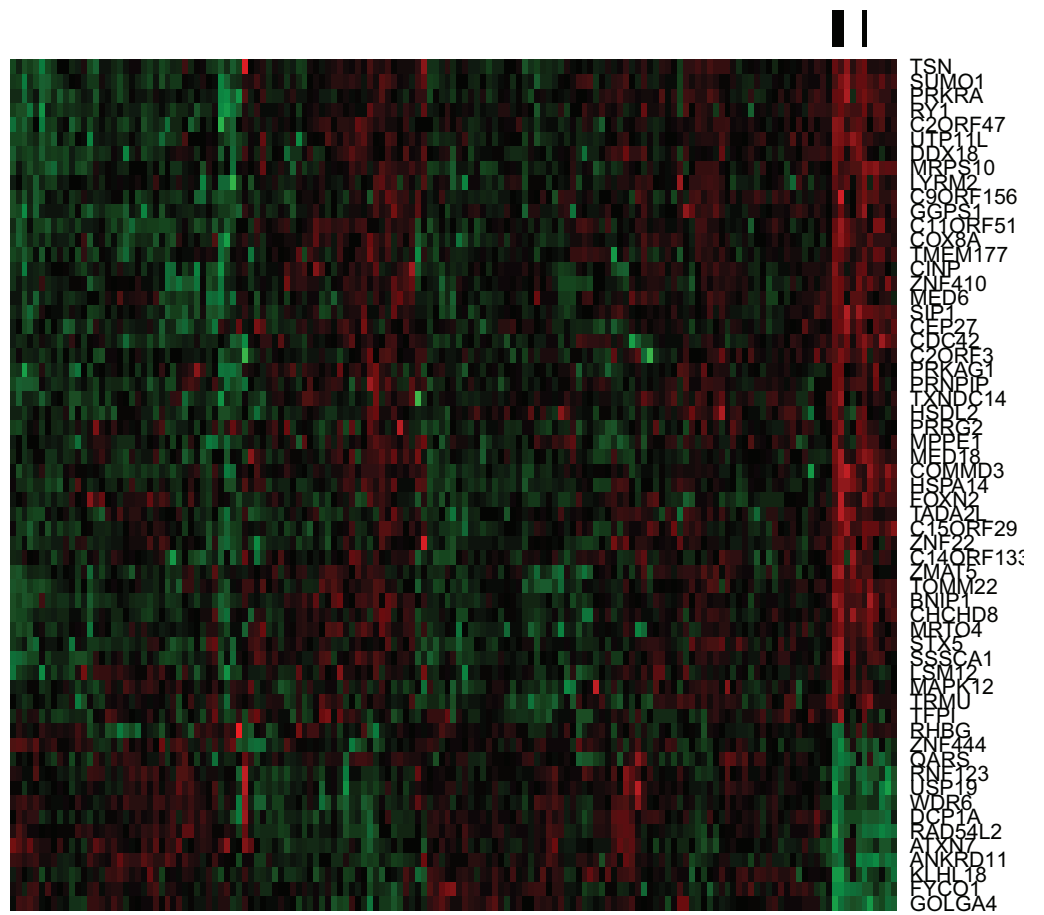
# NF1 Mutations



Samples

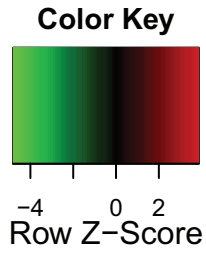


# NOS3 Mutations

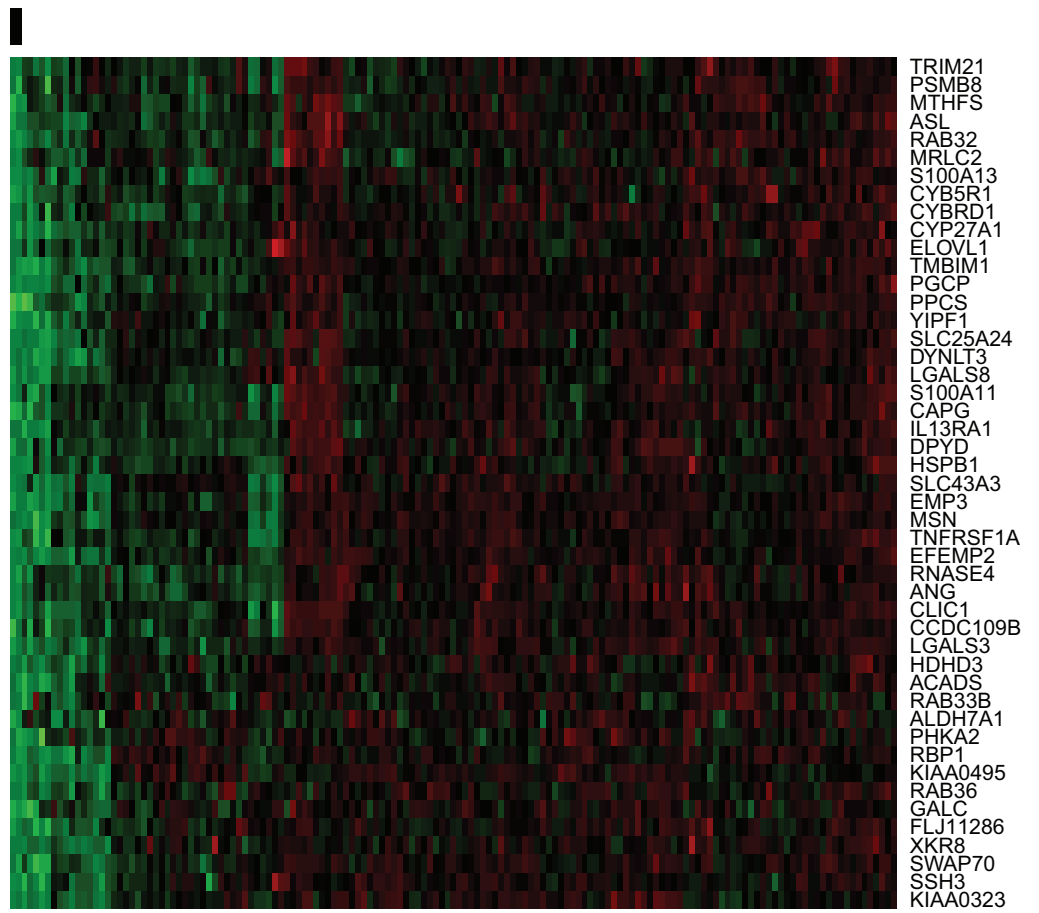


Samples

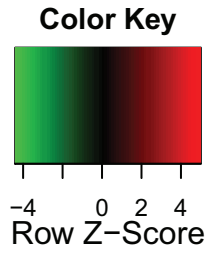




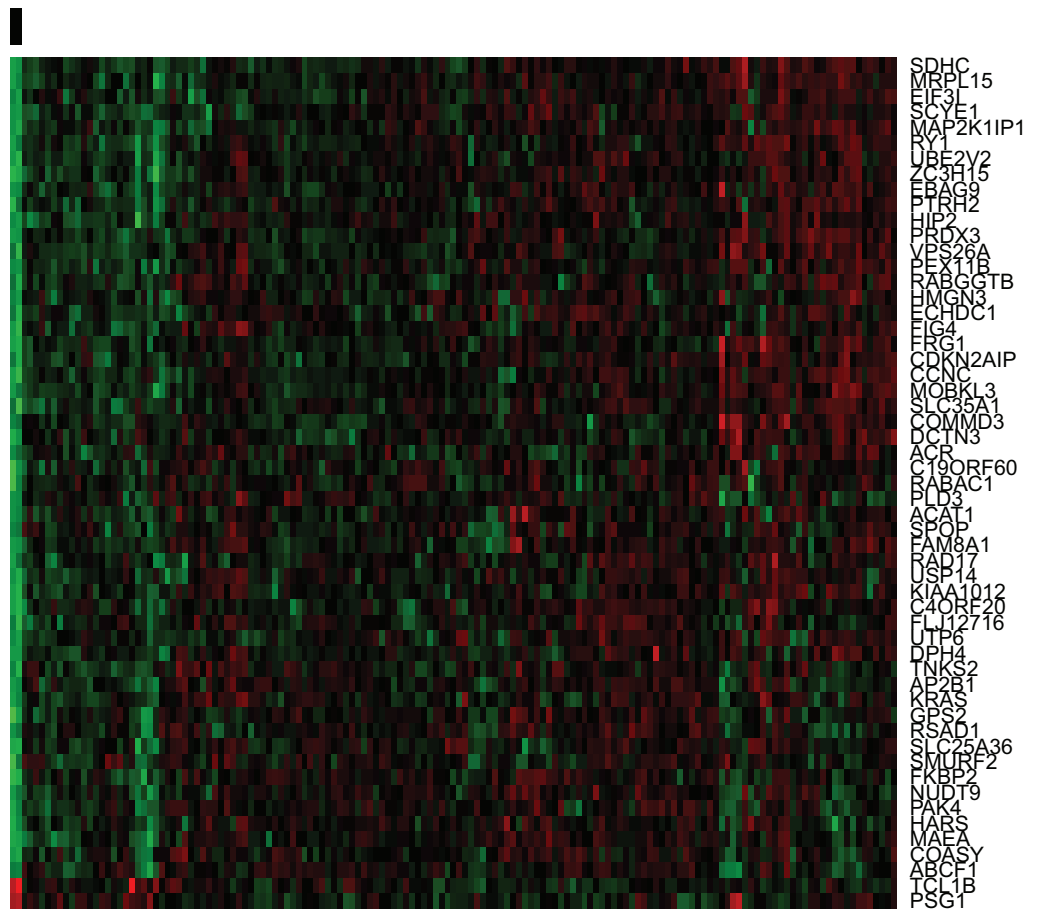
# PI15 Mutations



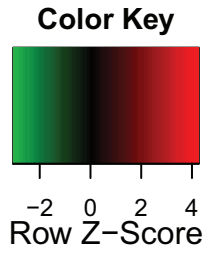
Samples



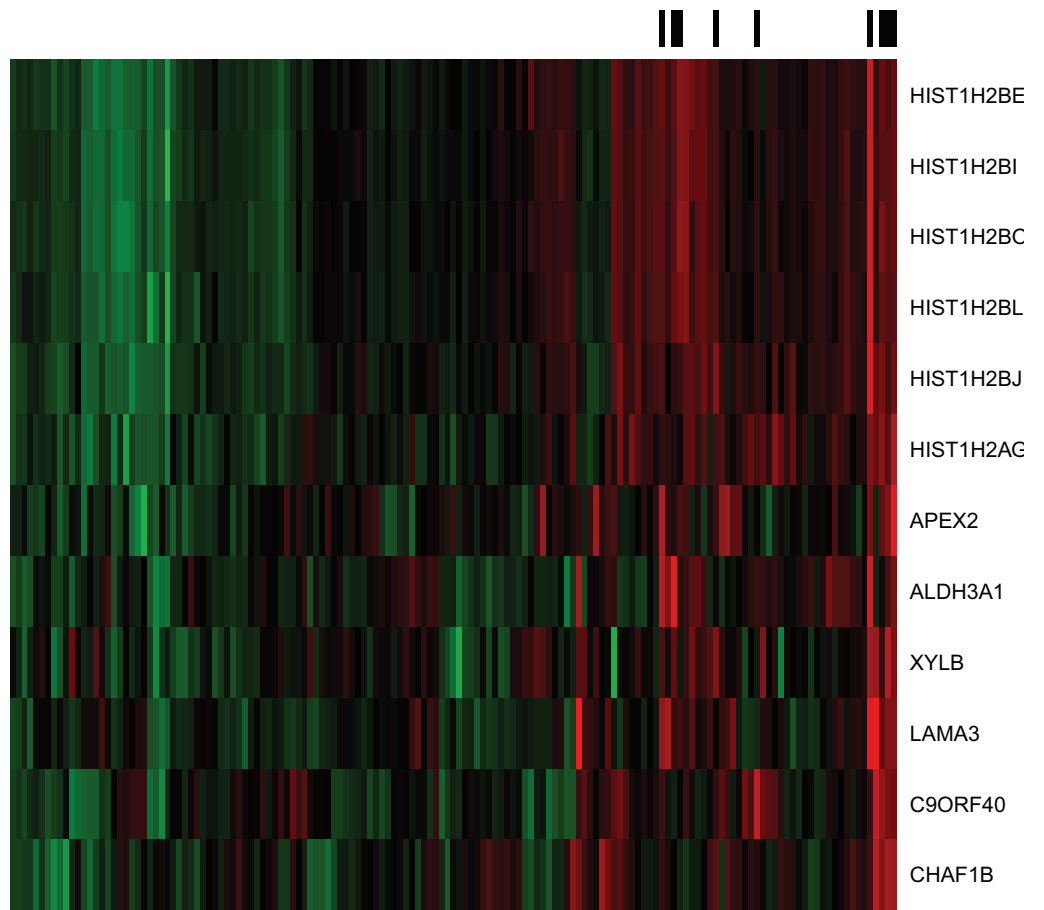
# PTK2B Mutations



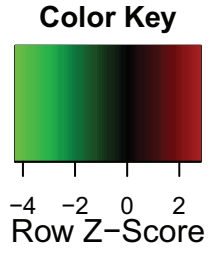
Samples



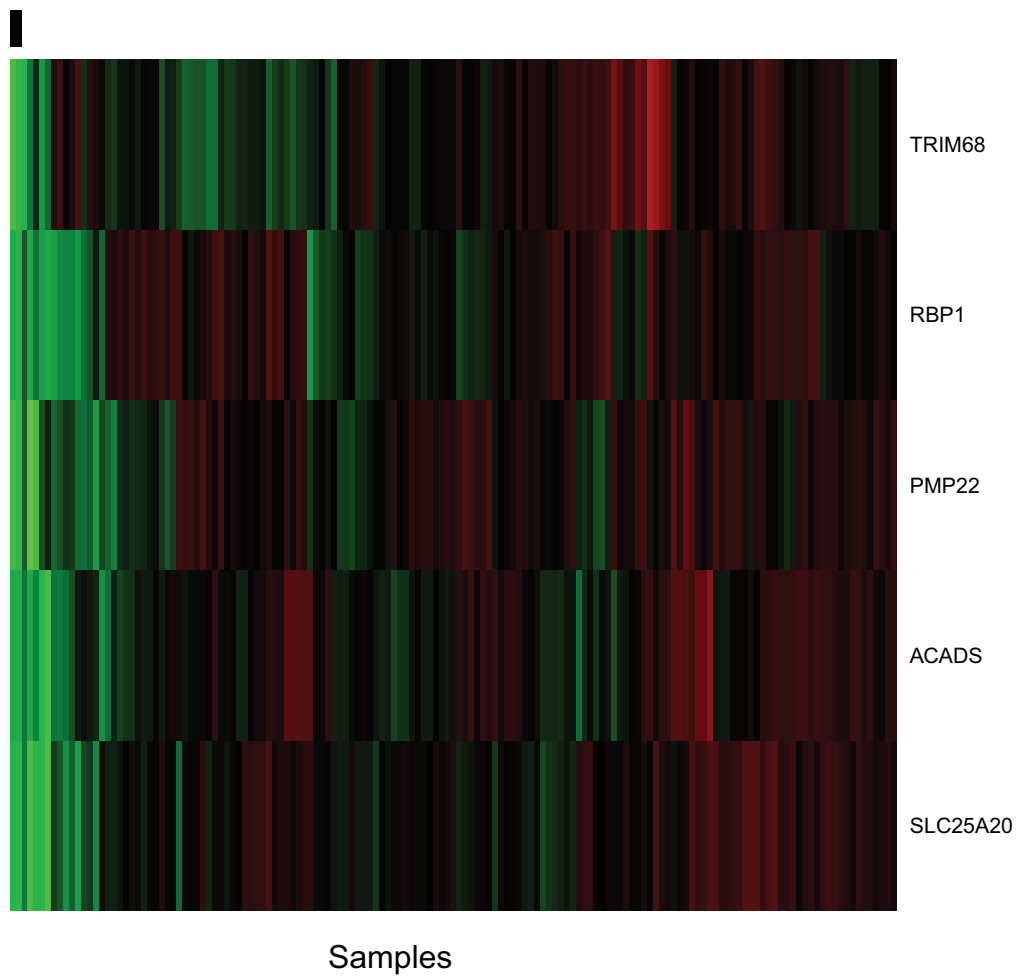
# RB1 Mutations

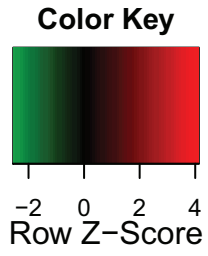


Samples

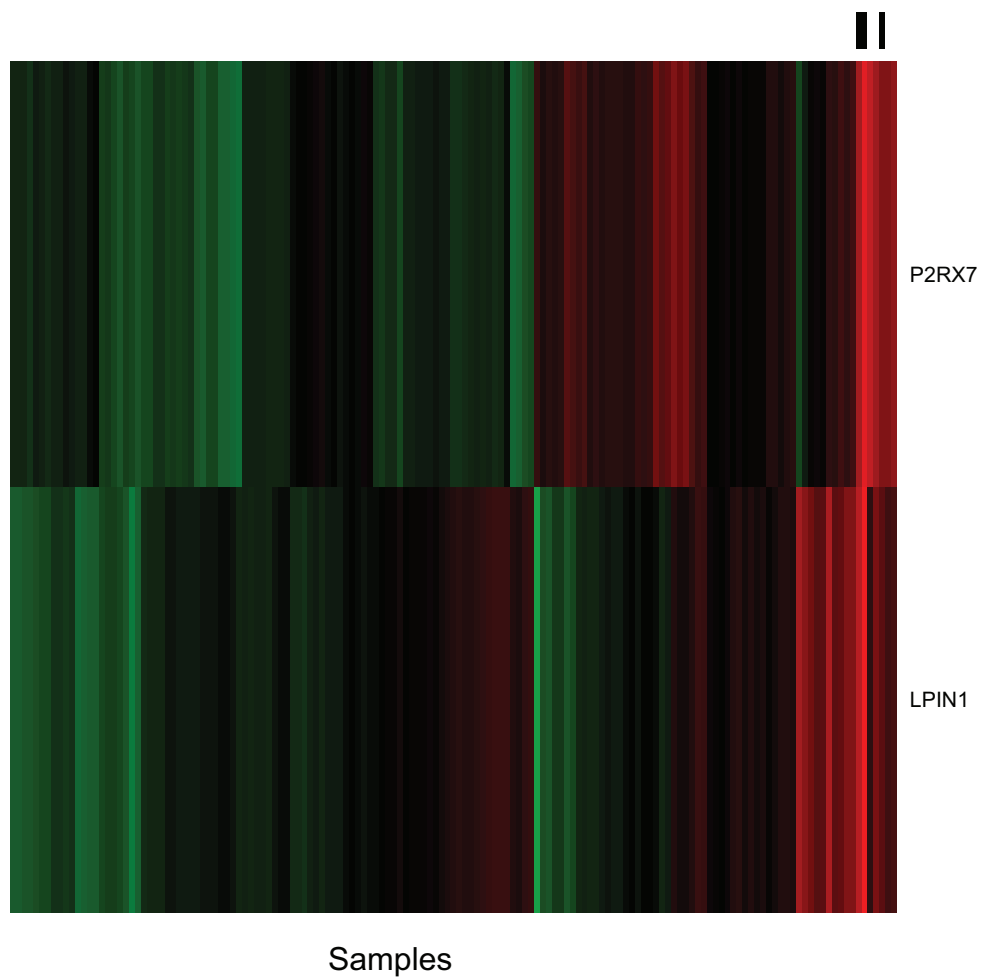


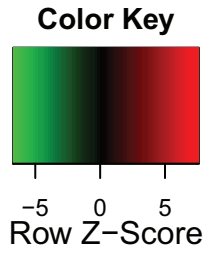
# SRGAP1 Mutations



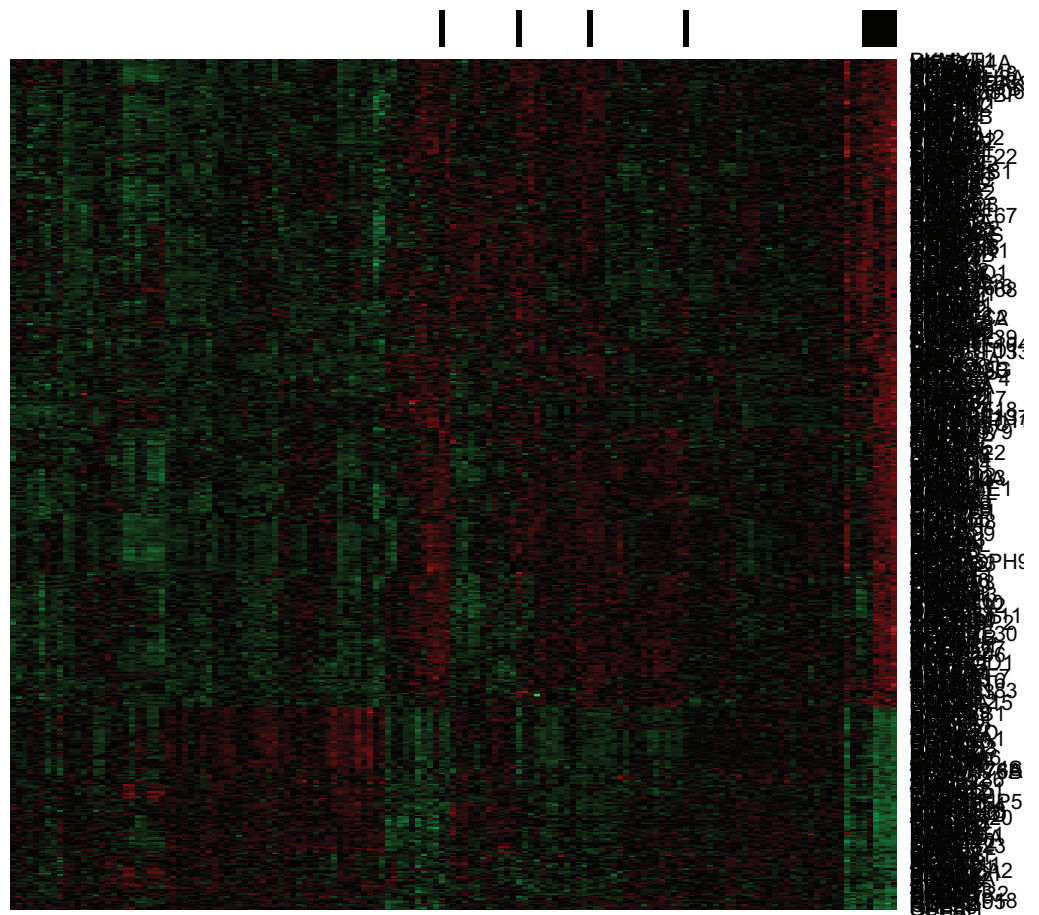


# STK36 Mutations

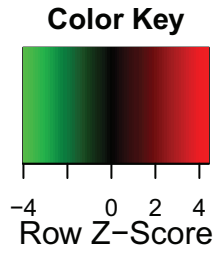




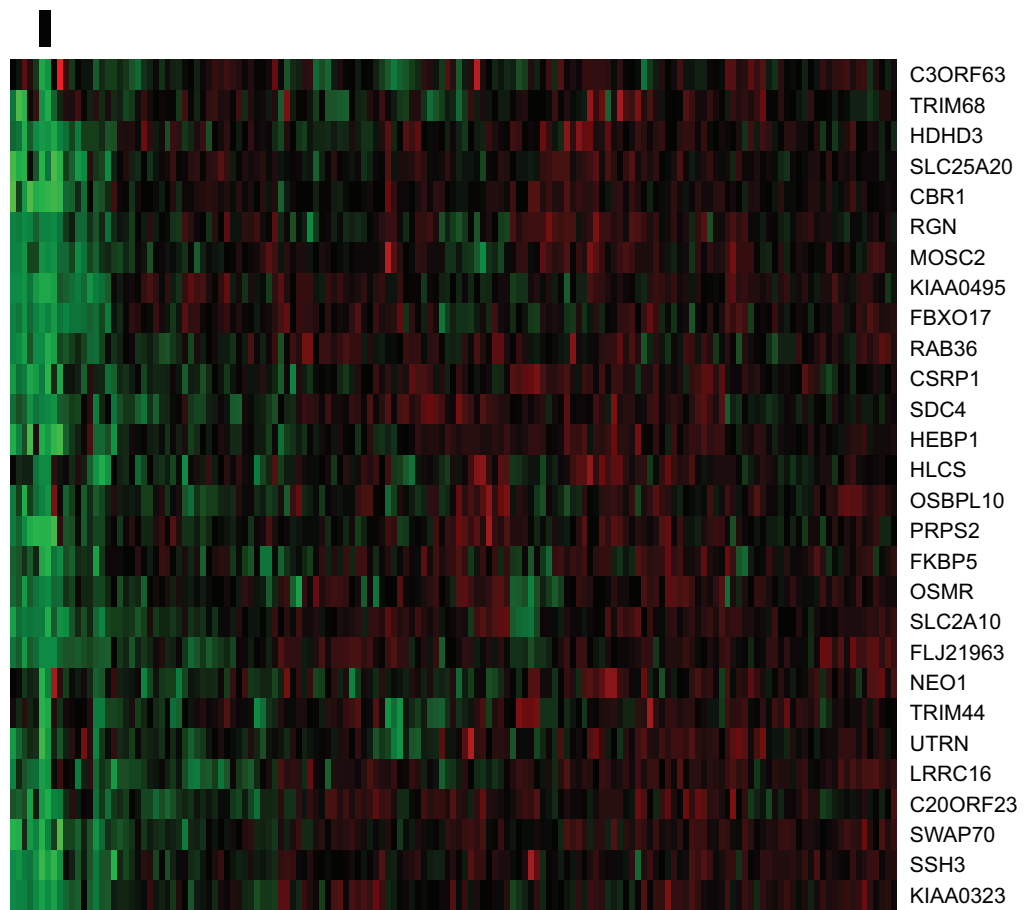
# SYNE1 Mutations



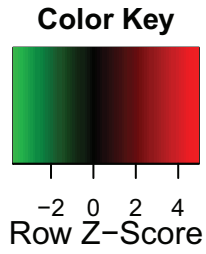
Samples



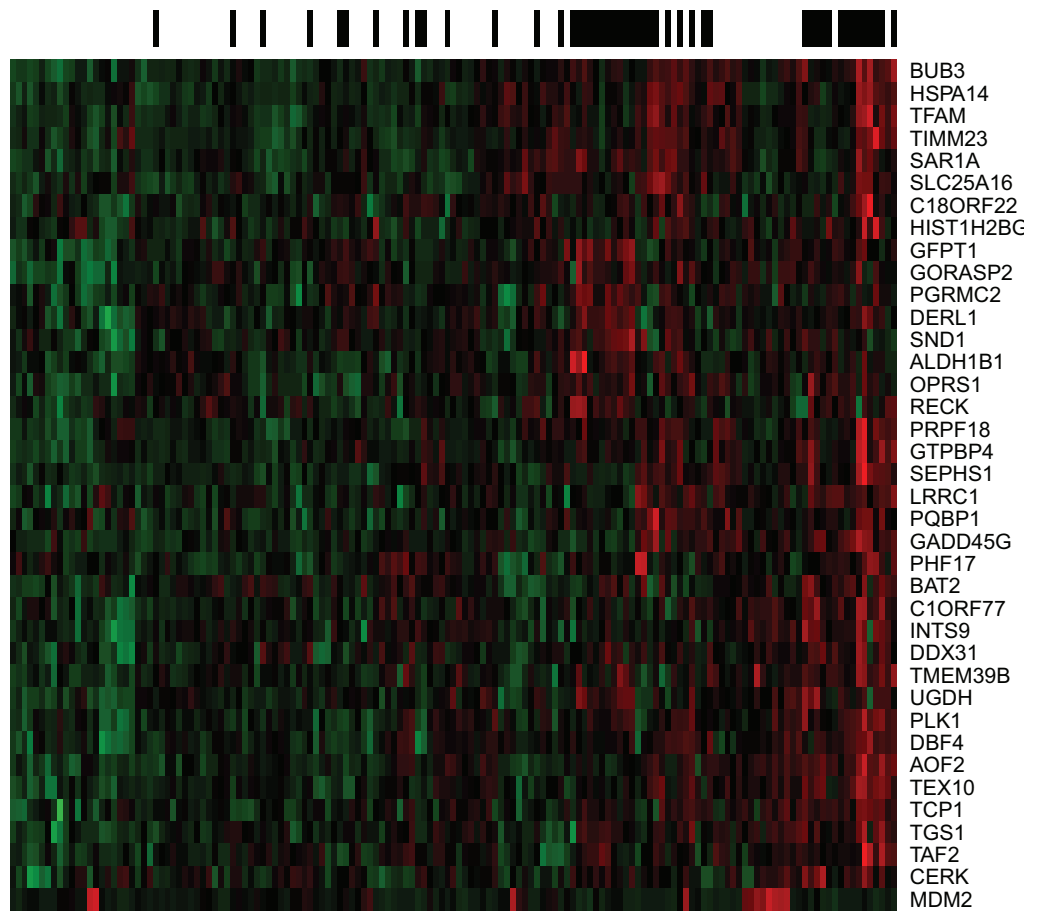
# TCF12 Mutations



Samples

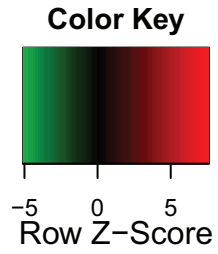


# TP53 Mutations

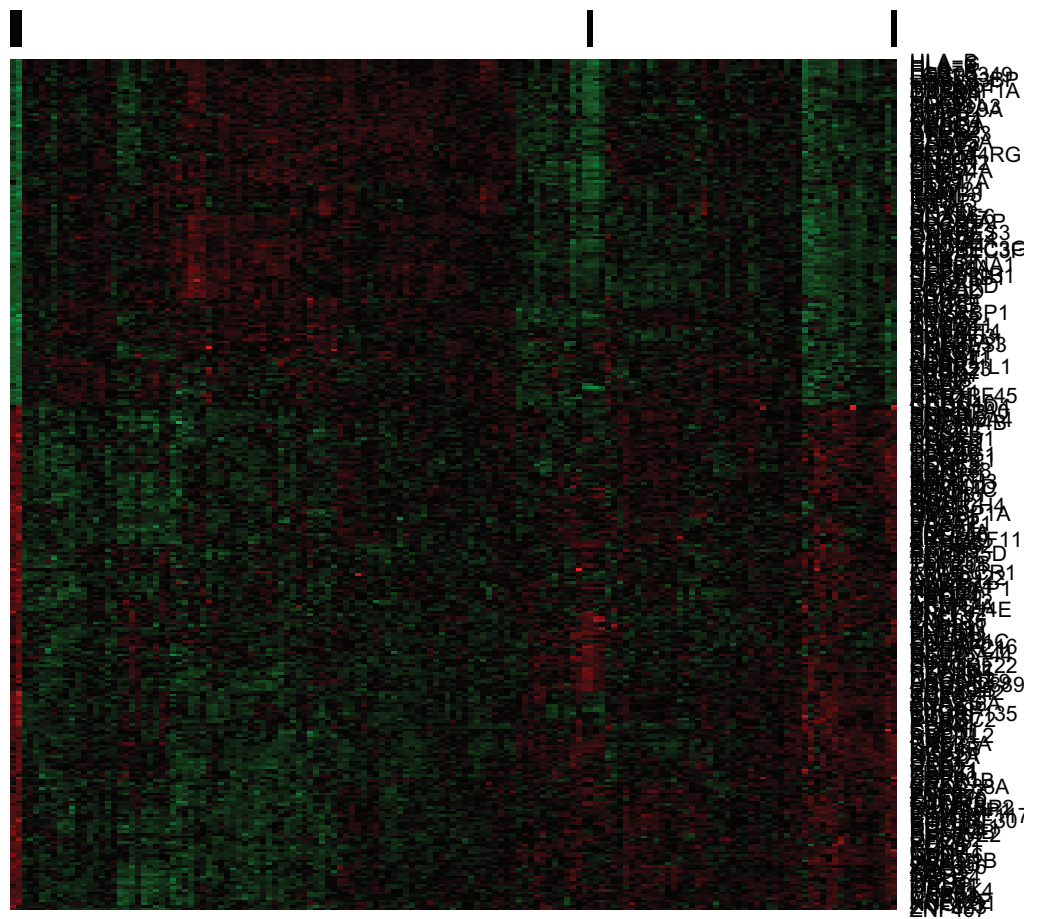


Samples

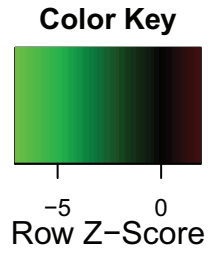




# TRPM3 Mutations



Samples



# WISP1 Mutations

