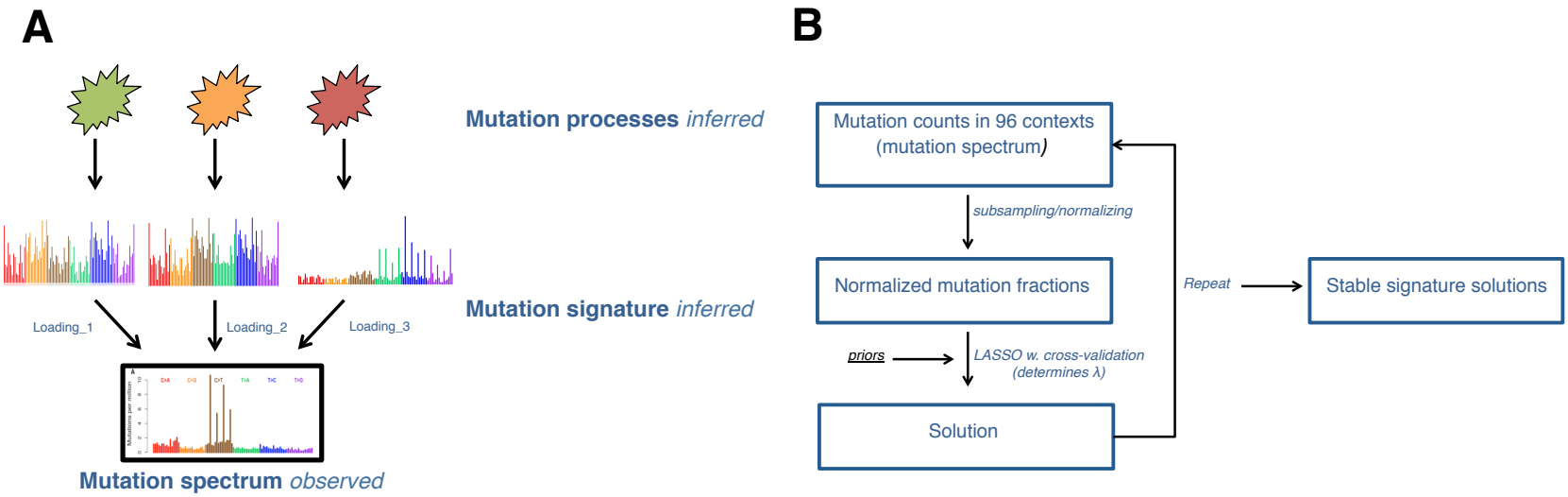
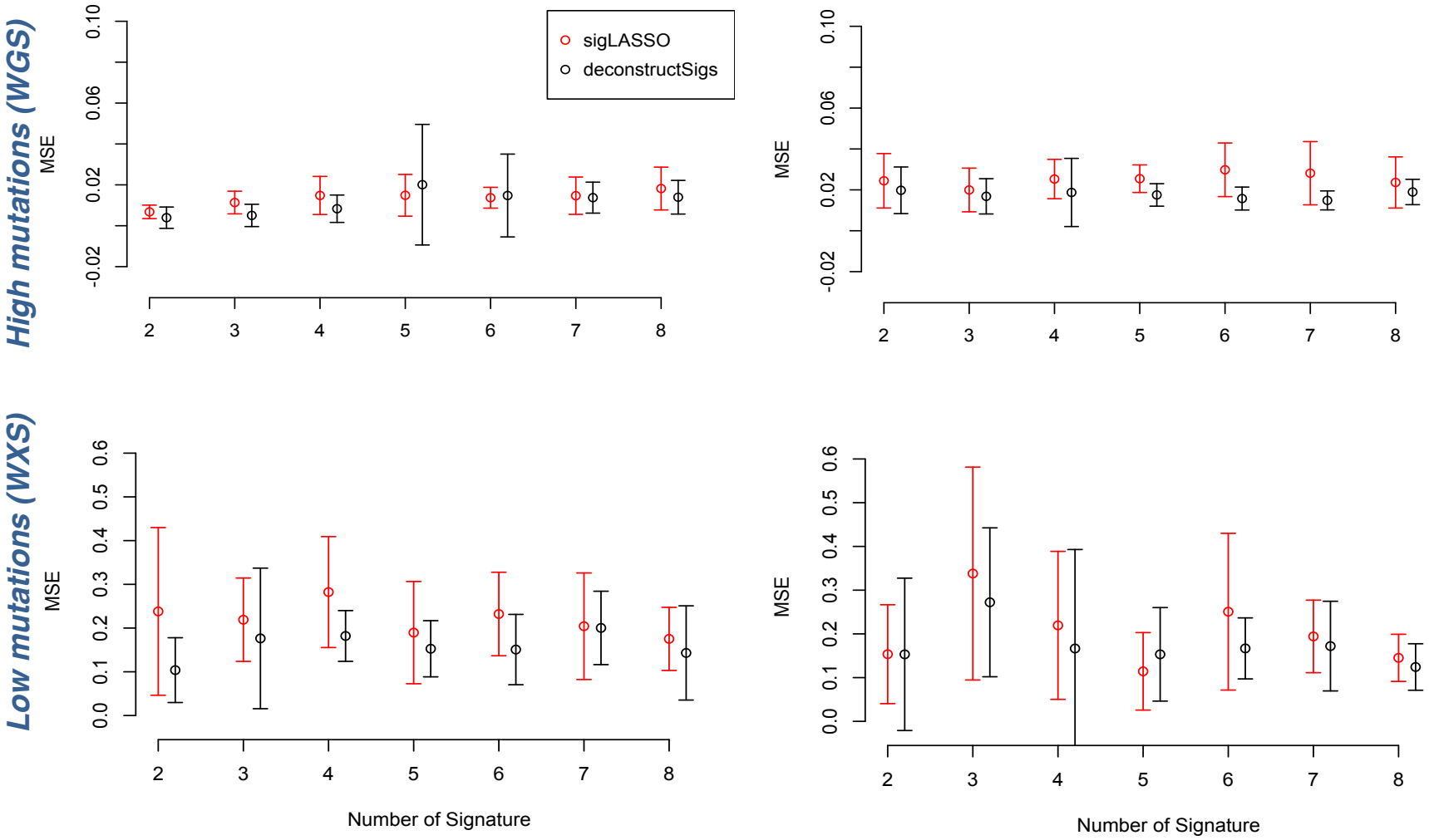
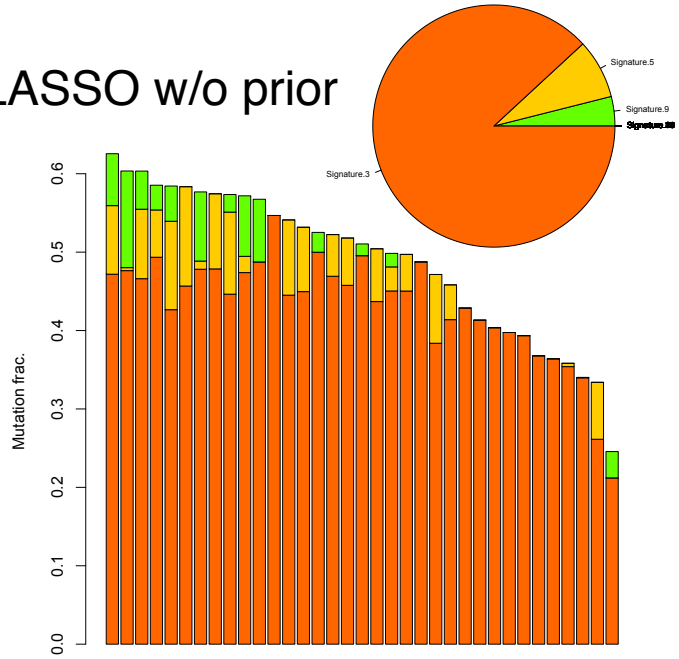

A
Mutation processes inferred
Mutation signature inferred
Loading_1
Loading_2
Loading_3
Mutation spectrum observed
B
Mutation counts in 96 contexts (mutation spectrum)
subsampling/normalizing
Normalized mutation fractions
priors
LASSO w. cross-validation (determines λ)
Solution
Repeat
Stable signature solutions

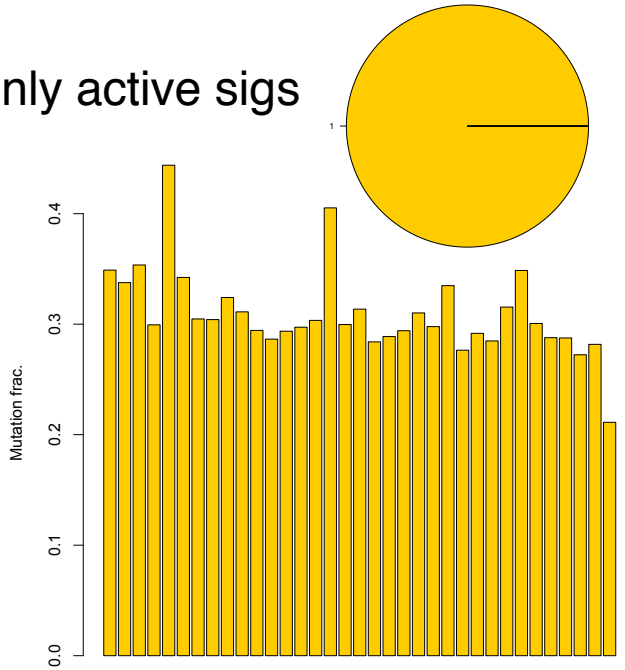


10 random simulations for each signature number, 5000/50 mutations, 0.1/0.2 noise respectively. Error bars indicate ne SD

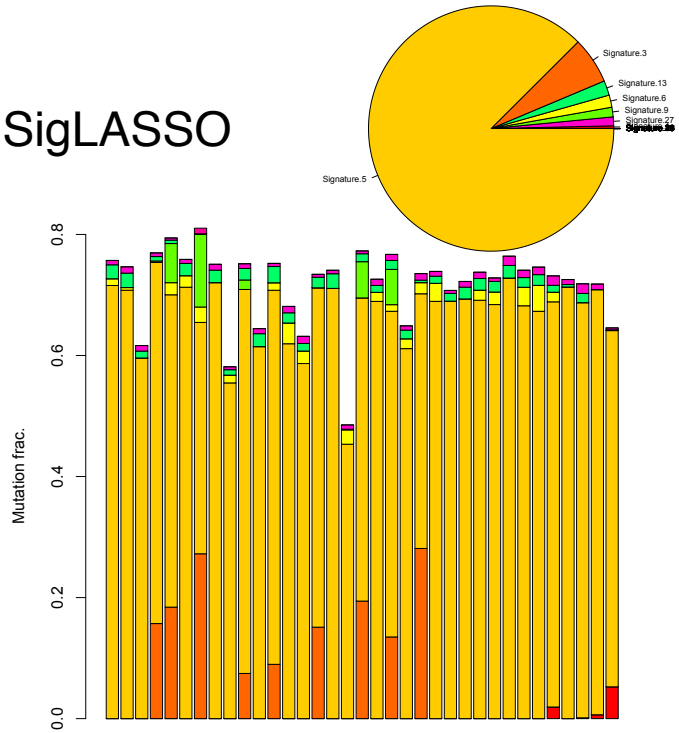
SigLASSO w/o prior



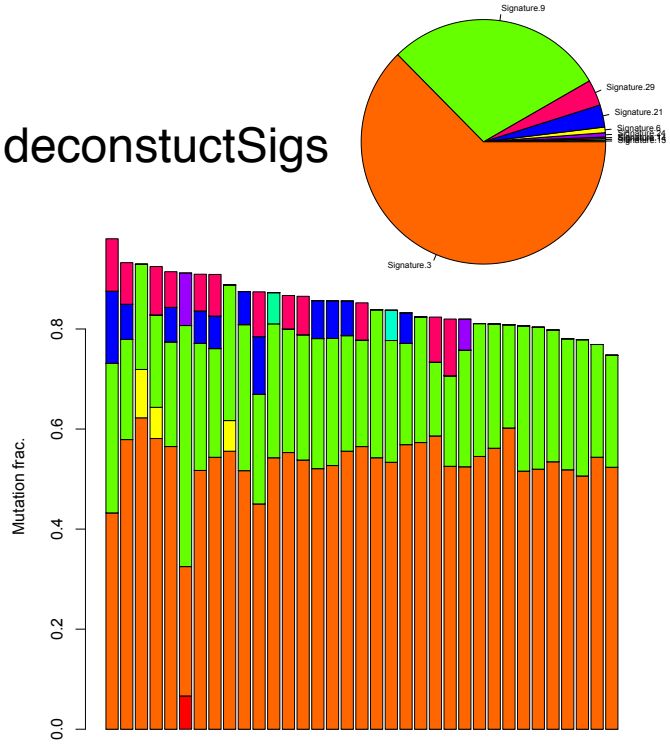
only active sigs



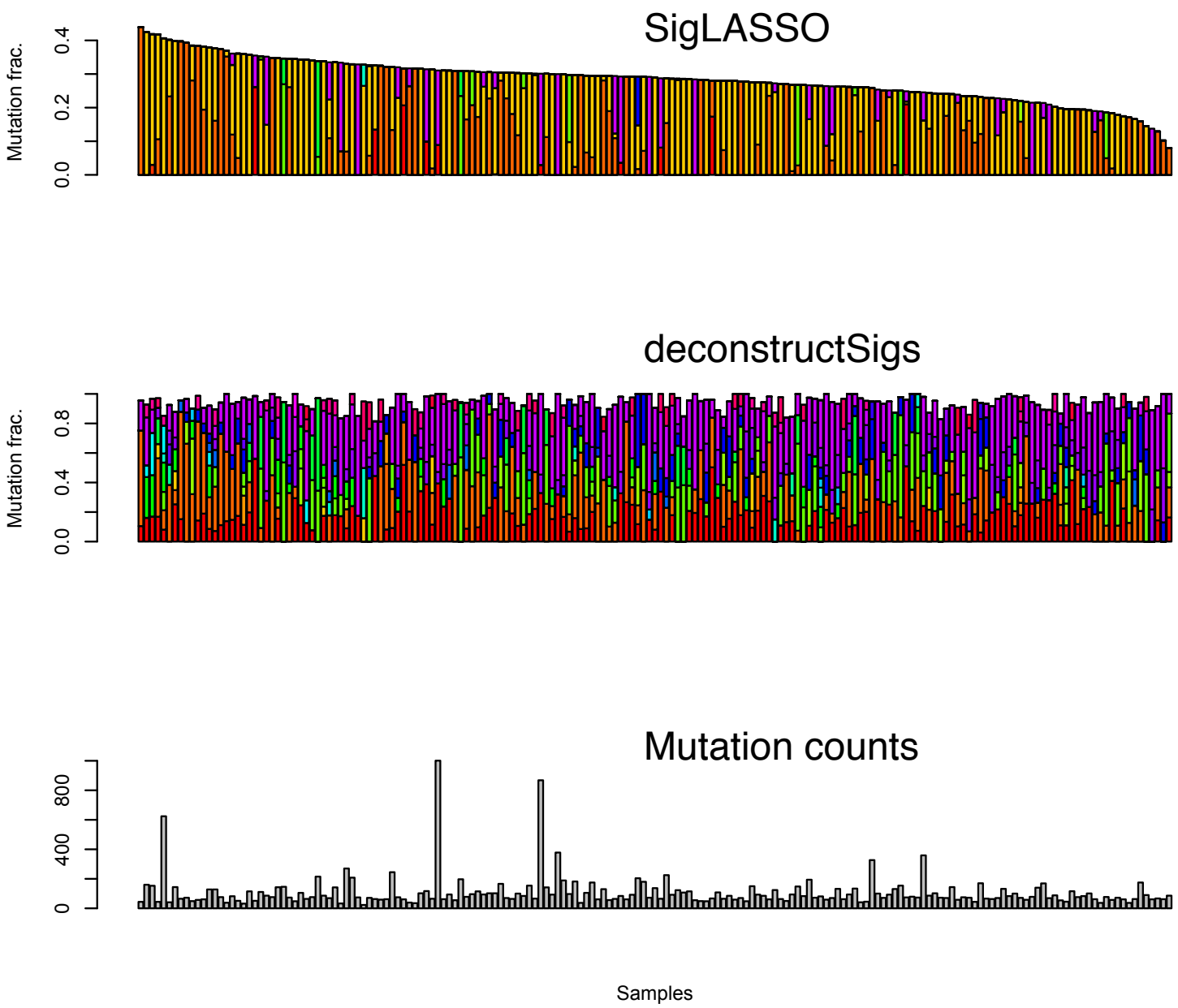
SigLASSO



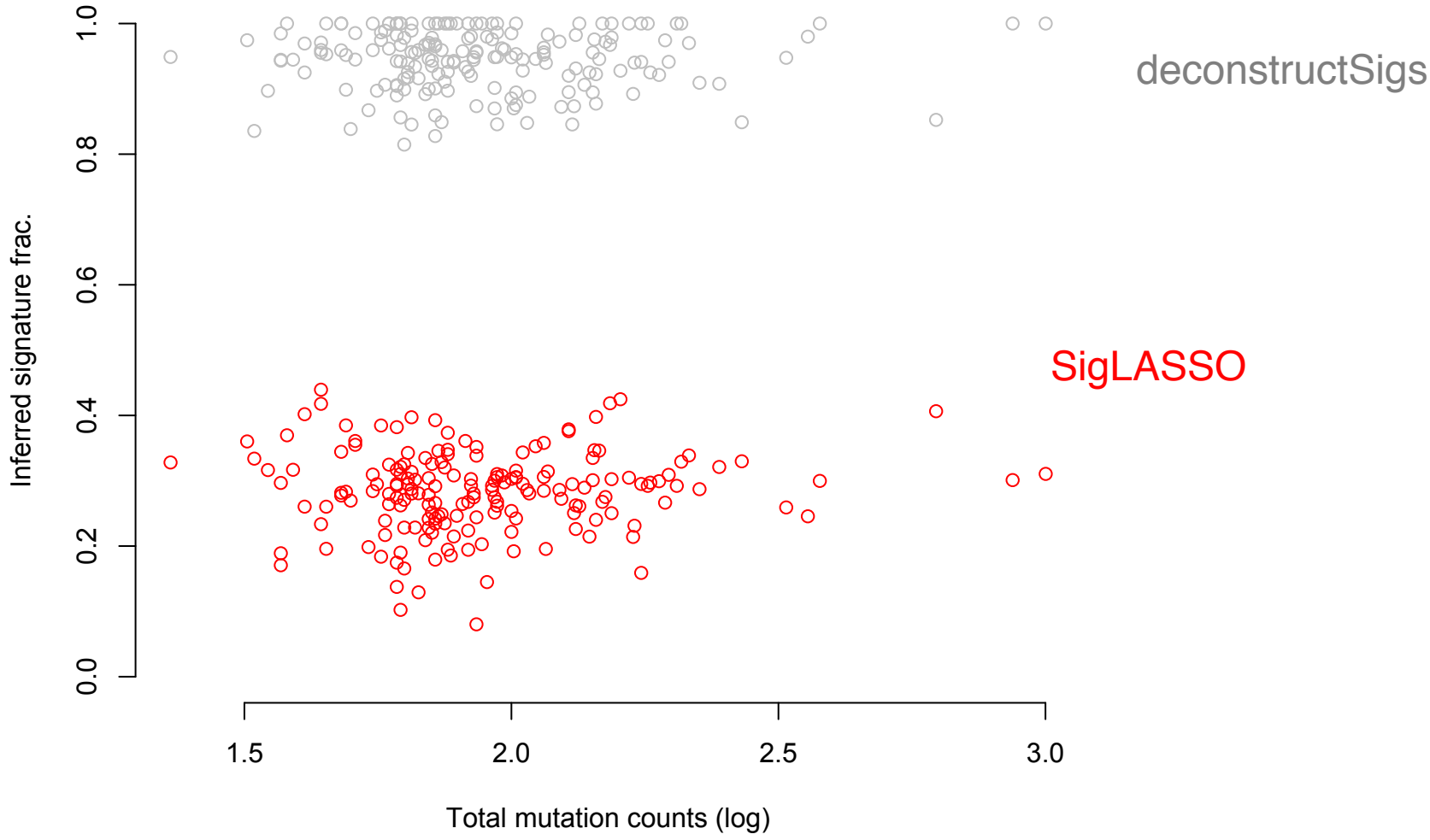
deconstuctSigs



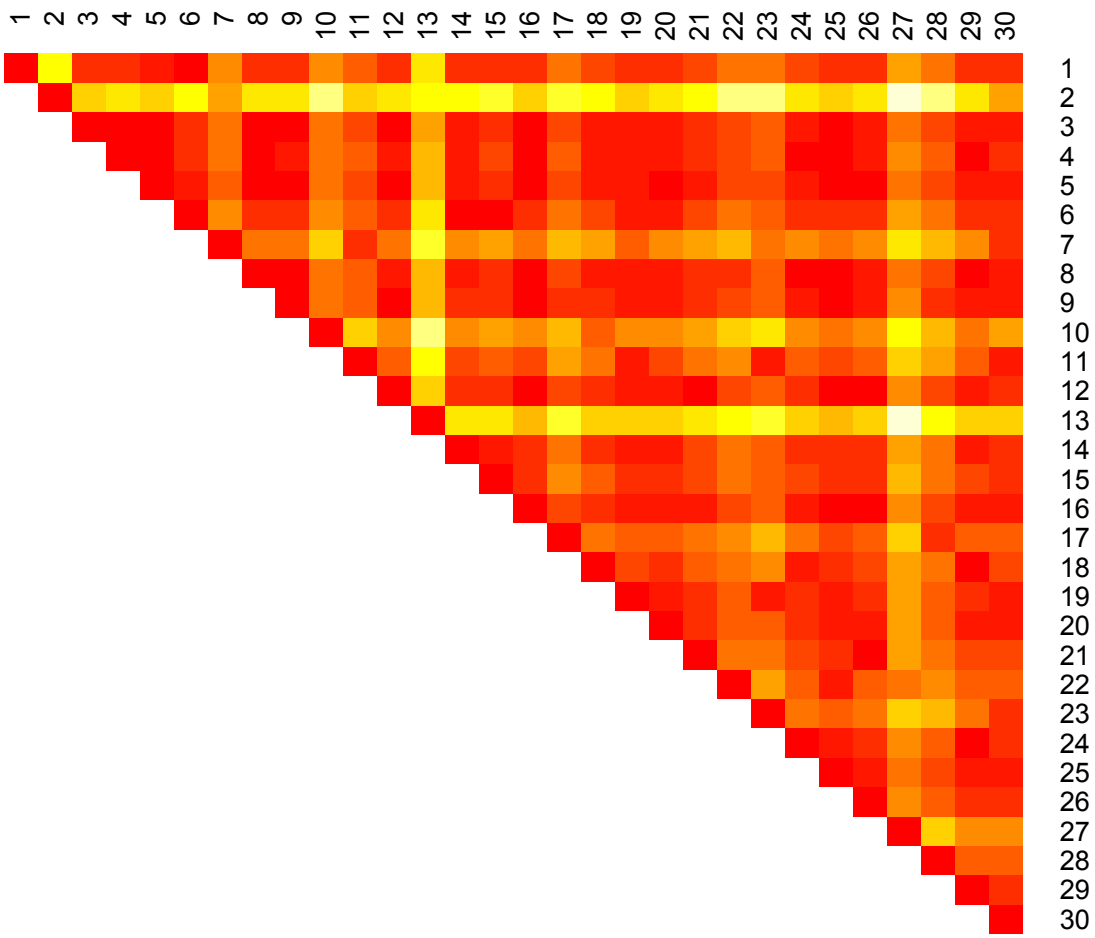
35 WGS pRCC samples



181 WXS ESCA samples…(mutation counts >20)



SigLASSO is more conservative and sensitive to total mutation counts (cor: 0.07 versus 0.01 in deconstructSigs)



Euclidean distances between signature