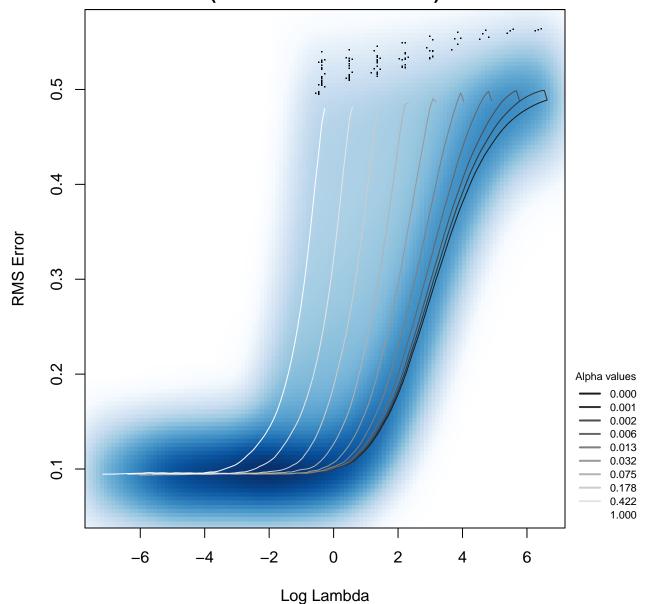
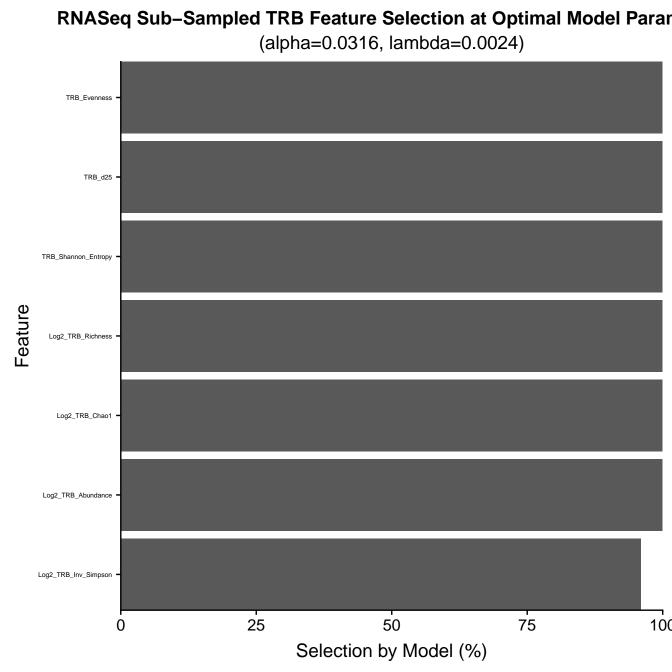
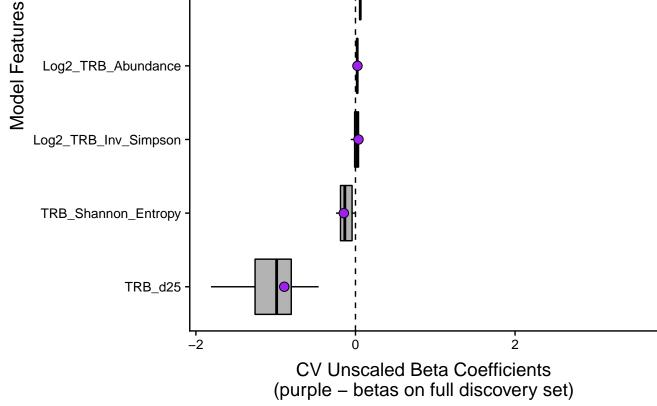
RNASeq Sub-Sampled TRB Elastic Net Parameter Optimization (towards minimum RMSE)



RNASeq Sub-Sampled TRB Model Stability Across Parameter Space 0.5 Alpha 0.0000 0.0010 Ф 0.4 0.0024 0.0056 Ф 0.0133 Ф 0.0316 0.0750 80 0.3 0.3 0.1778 0.4217 1.0000 95th C.I. width 0.012 0.2 0.010 0.008 0.006 0.1 Log Lambda

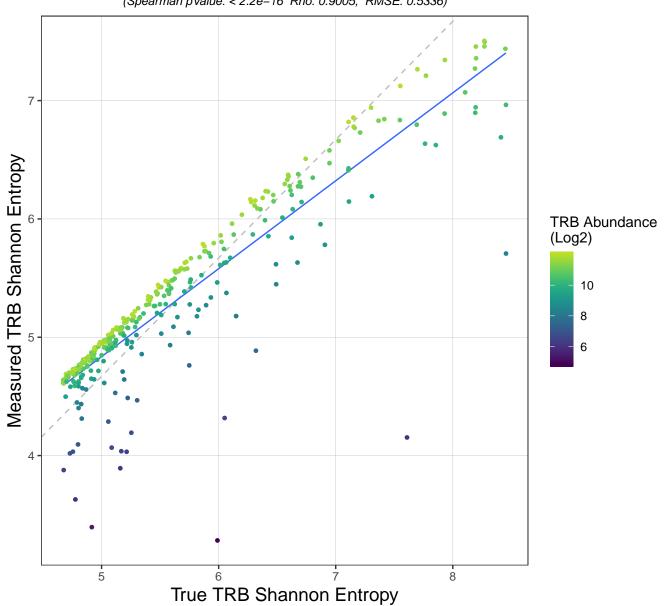


RNASeq Sub-Sampled TRB Optimal Beta Coefficie (alpha=0.0316, lambda=0.0024) TRB_Evenness Log2_TRB_Richness Log2_TRB_Chao1 Log2_TRB_Abundance -



RNASeq Sub-Sampled TRB as a reminder: Measured Entropy vs True Entropy

(Spearman pValue: < 2.2e-16 Rho: 0.9005; RMSE: 0.5336)



RNASeq Sub-Sampled TRB Predictions vs True Entropy (Spearman pValue: < 2.2e-16 Rho: 0.9879; RMSE: 0.0850) 8 -TRB Abundance Model Prediction (Log2) 10 6 6 5

True TRB Shannon Entropy

8

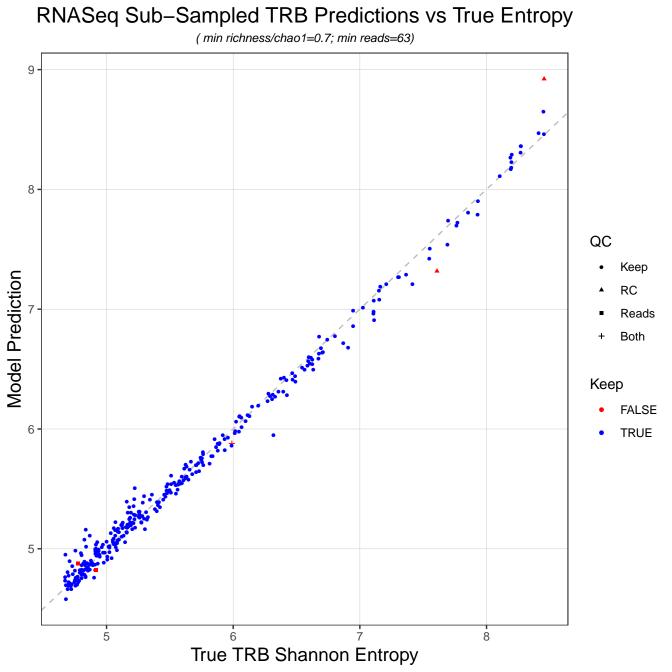
5

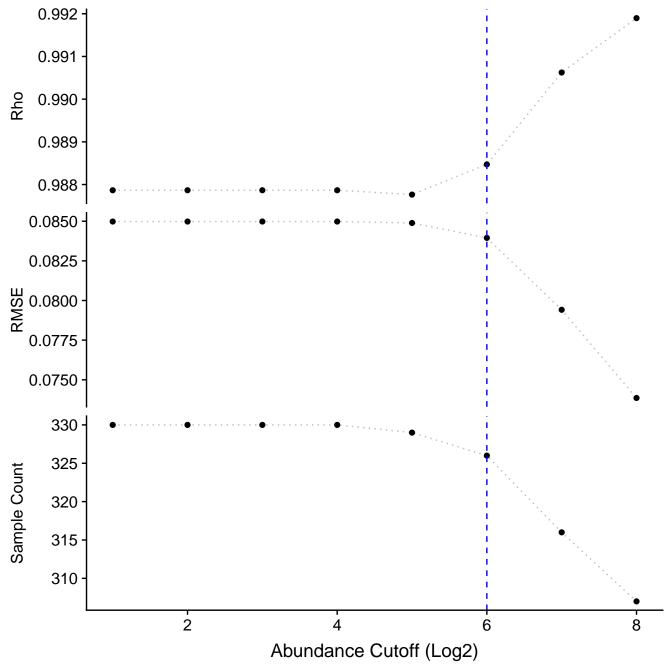
RNASeq Sub-Sampled TRB Predictions vs True Entropy (Spearman pValue: < 2.2e-16 Rho: 0.9879; RMSE: 0.0850) 8 -Model Prediction Richness/Chao1 0.9 8.0 0.7 6 5

True TRB Shannon Entropy

8

5





RNASeq Sub-Sampled TRB Predictions vs True Entropy (min richness/chao1=0.7; min reads=63) 8 -Model Prediction Keep **FALSE** TRUE 6 5 5 8 True TRB Shannon Entropy