



Figure S3. Regularization constraint for LASSO linear model of cell fitness in experimental cell lines and human breast cancers. We used a LASSO-regularized linear model combining all of our measures of passenger load to predict doubling time in our experimental cell lines (from genotypes) and the number of driver in TCGA breast cancers. The minimized objective function contained a penalty $\alpha\|\mathbf{w}\|$ proportional to the L1 norm of the unitized vector weights \mathbf{w} of every passenger load metric. We selected a penalty $\alpha = 10^{-3}$ that achieves a sparse solution without appreciably compromising predictive power (empirically selecting α such that the solution is more constrained than the optimally-predictive value is recommended in this regularization technique²⁴).