

Table S1**Major determinants in *E. coli* and yeast used as criteria for generating filtered datasets**

	Class I		Class II	
	<i>E. coli</i>	<i>S. cerevisiae</i>	<i>E. coli</i>	<i>S. cerevisiae</i>
Val	A73 G3:C70, T4:A69 A35, C36	A73 A35	Ser	G73 C72, G2:C71, A3:T70, C11:G24, R4:Y69 C11:G24
Ile	A73 C4:G69 G34, A35, T36 A37, A38 T12:A23, C29:G41	G34, A35, T36	Thr	G1:C72, C2:G71 G34, G35, T36 G1:C72 G35:T36
Leu	A73 T8•A14	A73 A35 G37	Pro	A73 G72 G35, G36 G15C48
Met	A73 T4:A69, A5:T68 C34, A35, T36	A73 C34, A35, T36	Gly	T73 G1:C72, C2:G71, G3:C70 C35, C36 A73 C2:G71, G3:C70 C35, C36
Cys	T73 G2:C71, C3:G70 G34, C35, A36	T73	His	C73 G0 A73 G0 G34, T35
Tyr	A73 T35	A73 C1:G72 G34, T35	Asp	G73 G2:C71 G34, T35, C36 C38 C38 G10 G73 G34, T35, C36 C38 G10•T25
Trp	G73 A1:T72, G2:71 G3:C70 C34, C35, A36	C34, C35	Lys	A73 T34, T35, T36
Glu	G1:C72, T2:A71 T34, T35 A37 TT:A24, T13:G22•A46, Δ47		Asn	G73 C34, T35, T36
Gln	G73 T1:A72, G2:C71 G3:C70 Y34, T35, G36 A37, T38 G10		Phe	A73 G34, A35, A36 G27:C43, G28:C42 T20 G44, T45, T59, T60 A73 G34, A35, A36 A37 G20
Arg	A/G73 C35, T/G36 A20	C35, T/G36	Ala	A73 G2:C71, G3•T70 G4:C69 G20 G3•T70