Table 1. Conserved Residues in Ste2

Conserved residues	Mutant substitution	Phenotype	Ref.
Ile53	A, F, L, C	WT	unpub.
Gly60	A, L	Decreased dimerization	(*1*)
Ala61			
Ile67 (med)	T	CAM	(*2*)
Phe81 (med)	C	WT	unpub.
Asn84	S,A,Q,C	CAM	(*3*)
Leu88			
Tyr101 (med)			
Leu138 (med)	R	DN sup	(*4*)
Glu143 (med)	K, R	LOF	(*5*)
	A, G	CAM	(*6*)
	K	DN sup	(*4*)
	C	WT	(*2*)
Leu146	R, P	LOF	(*5*)
	Q	DN sup/sst	(*4*)
	M	WT	(*2*)
Gln149	R, P, V, A, T	CAM	(*3*)
	G, H, N	Sst	(*3*)
	N, R	DN sup	(*4*)
	R, K, P	LOF	(*5*)
	R	CAM	(*6*)
	H, L	WT	(*2*)
Ser170	F, C	F=WT; C=LOF	(*2*)
Ile209 (med)	C	WT	(*7*)
Ser214	C, L	WT	(*2, 7*)
Ile215	C, L	WT	(*2, 7*)
Phe217 (med)	C, L	WT	(*2, 7*)
Lys225	C, N, E	LOF	(*2, 7*)
	R	DN sup	(*4*)
	I	CAM	(*2*)
Leu226	C, V	WT	(*2, 7*)
	W	CAM	(*6*)
many IL3 residues			
Leu247	C	WT	(*7*)
Ile249	C, M	WT	(*2, 7*)
	T	Partial LOF	(*2*)
Gln253	C, L	CAM	(*7, 8*)
Pro258	L	CAM	(*9*)
	M,Y,L,I,F, etc	CAM	(*10*)
Tyr266 (med)	C,D,A	LOF DN	(*11, 12*)
	F	WT	(*2*)
Leu287 (med)	F	No preActiv. complex	(*13*)
	P	Partial LOF	(*2*)
Leu289	S	CAM, DN sup	(*4*)
Pro290	C	Partial LOF (trafficking problem)	unpub.

Leu291	C	WT	unpub.
Trp295	C	Partial LOF (trafficking problem)	unpub.
Ala296	T P	CAM DN sup CAM	(*4*) (*2*)

Phenotypes:

WT	wildtype
CAM	constitutively active mutant
LOF	loss of function
Sst	supersensitive
DN sup	suppressor of dominant negative mutation

Table 2. Small Group Conserved Residues in Ste2

Group conserved residue	Mutant substitution	Phenotype	Ref.
Gly56	A, L	Decreased dimerization	(*1*)
Gly60	A, L	Decreased dimerization	(*1*)
Ala61			
Ala62			
Ser87	N	CAM	(*2*)
Thr131	C	WT	(*14*)
Ser145	P L L, T	LOF Sst/CAM DN sup	 (*6, 15*) (*4*)
Ser170	F, C	F=WT; C=LOF	(*2*)
Gly174	C	WT	(*14*)
Ala185	P C	DN WT	(*11*) (*14*)
Ala212	C P, G V	WT CAM CAM DN sup	(*7*) (*2*) (*4*)
Ser214	C, L	WT	(*2, 7*)
Ser219	C P	WT Antag response	(*7*) (*16*)
Cys252 (weak)	L, A G	WT DN sup	(*7, 8*) (*4*)
Ser254	F,G,L,W,V,C	CAM	(*7, 8*)
Ala281	C T	CAM DN sup/CAM	(*14*) (*4*)
Ser288	A, P	CAM	(*6, 8*)
Ser292	A	CAM	(*8*)
Ser293	A, C	WT	(*8*), unpub.

Phenotypes:		
	WT	wildtype
	CAM	constitutively active mutant
	LOF	loss of function
	Sst	supersensitive
	DN sup	suppressor of dominant negative mutation

Table 3. Polar Residues in Ste2

Polar	Mutant substitution	Phenotype	Ref.
Gln51	C	WT	(*14*)
Arg58	G, E	weak LOF	(*5*)
	D	WT	(*5*)
Asn84	S,A,Q,C	CAM	(*3*)
Gln85	A, C, E	WT	(*2, 3*)
	P	LOF	(*17*)
His94			
Lys100	C	WT	(*14*)
Asn132	I, Y	DN	(*11*)
	T, C	WT	(*2, 14*)
Gln135	P	DN	(*11*)
	C	WT	(*14*)
Glu143	K, R	LOF	(*5*)
	A, G	CAM	(*6*)
	K	DN Sup	(*4*)
	C	WT	(*2*)
Gln149	R, P, V, A, T	CAM	(*3*)
	G, H, N	Sst	(*3*)
	N, R	DN sup	(*4*)
	R, K, P	LOF	(*5*)
	R	CAM	(*6*)
	H, L	WT	(*2*)
Lys187	C	WT	(*14*)
Asn216	D	weak CAM	(*18*)
	D, Y	DN sup	(*4*)
	C	WT	(*7*)
Lys225	C, N, E	LOF	(*2, 7*)
	R	DN sup	(*4*)
	I	CAM	(*2*)
Gln253	C, L	CAM	(*7, 8*)
Asp275	V	DN	(*11*)
	C	WT	(*14*)

Phenotypes:		
	WT	wildtype
	CAM	constitutively active mutant
	LOF	loss of function
	Sst	supersensitive
	DN sup	suppressor of dominant negative mutation

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