

Table S3. Plasmids used in this study.

Vector	Background	Promoter	Expressed proteins
pKMK95 ^a	pMAL-c2x	tac	H ₆ -Ero1 α (E24-H468)
pAM87 ^b	pMAL-c2x	tac	H ₆ -Ero1 α
pKMK209	pMAL-c2x	tac	H ₆ -Ero1 α , ERp57
pAM119	pMAL-c2x	tac	H ₆ -Ero1 α C166A
pKMK123	pMAL-c2x	tac	H ₆ -Ero1 α C94/99A
pKMK126	pMAL-c2x	tac	H ₆ -Ero1 α C99/104A
pKMK128	pMAL-c2x	tac	H ₆ -Ero1 α C104/131A
pKMK130	pMAL-c2x	tac	H ₆ -Ero1 α C94/99/104/131A
pAM230	pMAL-c2x	tac	H ₆ -Ero1 α C208/241A
pAM2 ^c	pMAL-c2x	tac	H ₆ -Ero1 β (Q34-R467, natural D129V/H465Q variant)
pAM215 ^d	pMAL-c2x	tac	H ₆ -Ero1 β
pAM216	pMAL-c2x	tac	H ₆ -Ero1 β , ERp57
pAM6	pMAL-c2x	tac	H ₆ -Ero1 β C165A
pAM218	pMAL-c2x	tac	H ₆ -Ero1 β C90/95A
pAM219	pMAL-c2x	tac	H ₆ -Ero1 β C95/100A
pKMK212	pMAL-c2x	tac	H ₆ -Ero1 β C100/130A
pAM220	pMAL-c2x	tac	H ₆ -Ero1 β C90/95/100/130A
pOLR130	pET23	T7	H ₆ -PDI (D18-L508)
pAP1	pET23	T7	H ₆ -PDIp (Q22-L525)
pKMK177	pET23	tac	H ₆ -ERp57 (S25-L505)
pHIA282	pET23	T7	H ₆ -ERp46 (R33-L432, natural variant R354K)
pHIA64	pET23	T7	H ₆ -ERp72 (V21-L645)
pAM194	pET23	tac	H ₆ -P5 (L20-L440)
pAM139	pET23	tac	H ₆ T-PDI (D18-L508)
pAM172	pET23	tac	H ₆ T-PDI3FLAG
pAM227	pET23	tac	H ₆ -tDsbC-PDIp (Q22-L525)
pAM225	pET23	tac	H ₆ -tDsbC-ERp57 (S25-L505)
pAM226	pET23	tac	H ₆ -tDsbC-ERp46 (R33-L432, natural variant R354K)
pAM223	pET23	tac	H ₆ -tDsbC-ERp72 (V21-L645)
pAM224	pET23	tac	H ₆ -tDsbC-P5 (L20-L440)
pMJS333	pET23	tac	H ₆ -Erv1p (M1-H189)
pMJS205	pLysS	tac	Erv1p, PDI (D18-L508)
pAM104	pLysS	tac	Erv1p, PDI (D18-L508) C56A
pKMK221	pLysS	tac	Erv1p, PDI (D18-L508) C400A
pAM110	pLysS	tac	Erv1p, PDI (D18-L508) C53M/56A/397M/400A

^aAll Ero1 α variants in the list are based on this vector; that is, they span the same residues.

^bXhoI site restored to MCS to pKMK95 to prepare polycistronic vectors.

^cAll Ero1 β variants in the list are based on this vector; that is, they span the same residues and contain the same natural mutation.

^dXhoI site restored to MCS to pAM2 to prepare polycistronic vectors.

Abbreviations: H₆, His tag; H₆T, His tag followed by a TEV protease cleavage site; H₆-tDsbC, His-tagged truncated DsbC followed by a TEV protease cleavage site.