Ssra-Binding Protein (smpB) Rickettsia Prowazekii Recombinant Protein

PRODUCT OVERVIEW

Product Name	SsrA-binding protein (smpB), Recombinant Protein
Full Product Name	Recombinant Rickettsia prowazekii SsrA-binding protein (smpB)
Product Gene Name	smpB recombinant protein
Sequence	MIEDKKVIVQ NKKALFNYFI EEILEAGIVL KGSEVQSLRQ GKASIEESHA SDNGHEVFLY NCHITEYEKA NRFNHSTRRP RKLLLHAKEI KKIIGRIRIK GYTLVALSMY FNKKNKVKVE LGIAKGKKLY DKRAAIKEKD WKKDQSRLIR QK
Host	E Coli or Yeast or Baculovirus or Mammalian Cell
Form/Format	Lyophilized or liquid (Format to be determined during the manufacturing process)
Purity/Purification	Greater or equal to 85% purity as determined by SDS-PAGE. (lot specific)
Preparation and Storage	Store at -20 degrees C. For long-term storage, store at -20 degrees C or -80 degrees C. Store working aliquots at 4 degrees C for up to one week. Repeated freezing and thawing is not recommended.
Molecular Weight	17,770 Da
Sequence Positions	1-152, Full length protein
Tag Information	This protein contains an N-terminal tag and may also contain a C-terminal tag. Tag types are determined by various factors including tag-protein stability, please inquire for tag information.
Sterility	Sterile filter available upon request.
Endotoxin	Low endotoxin available upon request.
3D Structure	ModBase 3D Structure for O05968
Species	Rickettsia prowazekii (strain Madrid E)
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Related Product Information for smpB recombinant protein	MBS1257759 is a recombinant protein targeting smpB. Also known as Recombinant Rickettsia prowazekii SsrA-binding protein (smpB). Host: E Coli or Yeast or Baculovirus or Mammalian Cell.
Other Notes	Small volumes of smpB recombinant protein vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for smpB. It may not necessarily be applicable to this product.

NCBI GI #	15604295
NCBI GeneID	883303
NCBI Accession #	NP_220811.1
UniProt Primary Accession #	O05968
UniProt Related Accession #	O05968
GenBank Nucleotide #	NC_000963.1
NCBI Official Full Name	SsrA-binding protein

NCBI Official Symbol	smpB
UniProt Protein Name	SsrA-binding protein
UniProt Synonym Protein Names	Small protein B
Protein Family	SsrA-binding protein
UniProt Gene Name	smpB
NCBI Protein Information	SsrA-binding protein
UniProt Comments for smpB	Required for rescue of stalled ribosomes mediated by trans-translation. Binds to transfer-messenger RNA (tmRNA), required for stable association of tmRNA with ribosomes. tmRNA and SmpB together mimic tRNA shape, replacing the anticodon stem-loop with SmpB. tmRNA is encoded by the ssrA gene; the 2 termini fold to resemble tRNA(Ala) and it encodes a 'tag peptide', a short internal open reading frame. During trans-translation Ala-aminoacylated tmRNA acts like a tRNA, entering the A-site of stalled ribosomes, displacing the stalled mRNA. The ribosome then switches to translate the ORF on the tmRNA; the nascent peptide is terminated with the 'tag peptide' encoded by the tmRNA and targeted for degradation. The ribosome is freed to recommence translation, which seems to be the essential function of trans-translation.
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