Queuine Trna-Ribosyltransferase (tgt) Borrelia Burgdorferi Recombinant Protein

PRODUCT OVERVIEW

Product Name	Queuine tRNA-ribosyltransferase (tgt), Recombinant Protein
Full Product Name	Recombinant Borrelia burgdorferi Queuine tRNA-ribosyltransferase (tgt)
Product Gene Name	tgt recombinant protein
Sequence	MFSVIKNDKH FNARVGFLNL PHGRVDIPCF MPVGTLGAMK GLKHAVLEKL ECNLMLANTY HLYLRLGIKT VEKYVGLHNF TTWNKNFLTD SGGFRVFSFS DLRKIDLKGV HFKFHIDGSY HYFTSEGIFA MQEIFGSDII MPLDICSSYG IDYNEANLYT NITTNWASST FKSSKNRKEG YNGLLFLITQ GNFFKDLRKR SINDILELDS PGIAIGGISV GEPREKYLEI LEYSFLLIPK EKPRYVMGIG TPHYILNAIY YGIDIFDCFN PARITRHGSL LTDNGIMCIG RKEYKDDTSK VEKNCICTLC KRYSRGYLRH LIKSKELFGI VLASEHNIHY MFRLISKIRA AILNDDFLNF RTSYLKKYEE ENFDE
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	43,247 Da
Sequence Positions	1-375, 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 B7J0Q4
Species	Borrelia burgdorferi (strain ZS7)
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Related Product Information for tgt recombinant protein	MBS1261242 is a recombinant protein targeting tgt. Also known as Recombinant Borrelia burgdorferi Queuine tRNA-ribosyltransferase (tgt). Host: E Coli or Yeast or Baculovirus or Mammalian Cell.
Other Notes	Small volumes of tgt 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 tgt. It may not necessarily be applicable to this product.

NCBI GI #	488733834
NCBI Accession #	WP_002657237.1
UniProt Primary Accession #	B7J0Q4
GenBank Nucleotide #	WP_002657237.1
NCBI Official Full Name	tRNA guanosine(34) transglycosylase Tgt

UniProt Protein Name	Queuine tRNA-ribosyltransferase
UniProt Synonym Protein Names	Guanine insertion enzyme
Protein Family	Putative queuine tRNA-ribosyltransferase
UniProt Gene Name	tgt
UniProt Comments for tgt	Catalyzes the base-exchange of a guanine (G) residue with the queuine precursor 7-aminomethyl-7-deazaguanine (PreQ1) at position 34 (anticodon wobble position) in tRNAs with GUN anticodons (tRNA-Asp, -Asn, -His and -Tyr). Catalysis occurs through a double-displacement mechanism. The nucleophile active site attacks the C1' of nucleotide 34 to detach the guanine base from the RNA, forming a covalent enzyme-RNA intermediate. The proton acceptor active site deprotonates the incoming PreQ1, allowing a nucleophilic attack on the C1' of the ribose to form the product. After dissociation, two additional enzymatic reactions on the tRNA convert PreQ1 to queuine (Q), resulting in the hypermodified nucleoside queuosine (7-(((4,5-cis-dihydroxy-2-cyclopenten-1-yl)amino)methyl)-7-deazaguanosine).
Precautions	All of MyBioSource's Products are for scientific laboratory research purposes and are not for diagnostic, therapeutics, prophylactic or in vivo use. Through your purchase, you expressly represent and warrant to MyBioSource that you will properly test and use any Products purchased from MyBioSource in accordance with industry standards. MyBioSource and its authorized distributors reserve the right to refuse to process any order where we reasonably believe that the intended use will fall outside of our acceptable guidelines.
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