Thymidylate Synthase 1 (thyA1) Bacillus Subtilis Subsp. Spizizenii Recombinant Protein

PRODUCT OVERVIEW

Product Name	Thymidylate synthase 1 (thyA1), Recombinant Protein
Full Product Name	Recombinant Bacillus subtilis subsp. spizizenii Thymidylate synthase 1 (thyA1)
Product Gene Name	thyA1 recombinant protein
Sequence	MTQFDKQYNS IIKDIMNNGI SDEEFNVRTK WDSDGTPAHT LSVISKQMRF DNSEVPILTT KKVAWKTAIK ELLWIWQLKS NDVTELNKMG VHIWDQWKQE DGTIGHAYGF QLGKKNRNLN GEKVDQVDYL LHQLKNNPSS RRHITMLWNP DELDSMALTP CVYETQWYVK QGKLHLEVRA RSNDMALGNP FNVFQYNVLQ RMIAQVTGYE LGEYIFNIGD CHVYTRHIDN LKIQMEREQF EAPELWINPE VKDFYDFTID DFKLFNYKHG DKLLFEVAV
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	32,890 Da
Sequence Positions	1-279, 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 E0TVT6
Species	Bacillus subtilis subsp. spizizenii (strain 23059 / NRRL B-14472 / W23)
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Related Product Information for thyA1 recombinant protein	MBS1230429 is a recombinant protein targeting thyA1. Also known as Recombinant Bacillus subtilis subsp. spizizenii Thymidylate synthase 1 (thyA1). Host: E Coli or Yeast or Baculovirus or Mammalian Cell.
Other Notes	Small volumes of thyA1 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 thyA1. It may not necessarily be applicable to this product.

NCBI GI #	489313780
NCBI Accession #	WP_003221167.1
UniProt Primary Accession #	E0TVT6
UniProt Secondary Accession #	O30395; O30396; P42326
GenBank Nucleotide #	WP_003221167.1
NCBI Official Full Name	Thymidylate synthase 1

UniProt Protein Name	Thymidylate synthase 1
UniProt Synonym Protein Names	Thymidylate synthase A
Protein Family	Thymidylate synthase
UniProt Gene Name	thyA1
UniProt Synonym Gene Names	TSase A
UniProt Comments for thyA1	Catalyzes the reductive methylation of 2'-deoxyuridine-5'-monophosphate (dUMP) to 2'-deoxythymidine-5'-monophosphate (dTMP) while utilizing 5,10-methylenetetrahydrofolate (mTHF) as the methyl donor and reductant in the reaction, yielding dihydrofolate (DHF) as a by-product. This enzymatic reaction provides an intracellular de novo source of dTMP, an essential precursor for DNA biosynthesis.
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