Data Sheet (Cat.No.TMPY-03753)

TargetMol

WARS Protein, Human, Recombinant (His)

General Information

Synonyms:	tryptophanyl-tRNA synthetase;GAMMA-2;γ-2;IFI53;IFP53
Protein Construction:	A DNA sequence encoding the human WARS (P23381-1) (Pro2-Gln471) was fused with a polyhistide tag at the N-terminus. Predicted N terminal: His
Species:	Human
Expression Host:	Baculovirus Insect Cells
Accession:	P23381-1
Molecular Weight:	55.2 kDa (predicted); 55 kDa (reducing conditions)

QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 90 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing 20 mM Tris, 500 mM NaCl, 10% glycerol, pH 8.0.Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

Reconstituted with sterile deionized water to 0.25 mg/mL. Reconstitution conditions may vary depending on the lot.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

WARS, also known as TrpRS, is an aminoacyl-tRNA synthetase that belongs to the class-I aminoacyl-tRNA synthetase family. There are two forms of tryptophanyl-tRNA synthetase: a cytoplasmic form, named WARS, and a mitochondrial form, named WARS2. They catalyze the aminoacylation of tRNA by their cognate amino acid. Because of their central role in linking amino acids with nucleotide triplets contained in tRNAs, aminoacyl-tRNA synthetases are thought to be among the first proteins that appeared in evolution. WARS catalyzes the

aminoacylation of tRNA(trp) with tryptophan and is induced by interferon.

Reference

Buwitt U. et al., 1992, EMBO J. 11 (2): 489-96.
Fleckner J. et al., 1992, Proc Natl Acad Sci. 88 (24): 11520-4.
Ewalt KL. et al., 2002, Biochemistry. 41 (45): 13344-9.

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