WARS Protein, Human (sf9, His)

Cat. No.:	HY-P73540
Synonyms:	Tryptophan--tRNA ligase, cytoplasmic; IFP53; TrpRS; WARS1; WARS
Species:	Human
Source:	Sf9 insect cells
Accession:	P23381 (P2-Q471)
Gene ID:	7453
Molecular Weight:	Approximately 55 kDa

PROPERTIES

Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 μm filtered solution of 20 mM Tris, 500 mM NaCl, 10% Glycerol, pH 8.0. Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH_2O.
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	WARS, encompassing Isoform 1, Isoform 2, T1-TrpRS, and T2-TrpRS, displays aminoacylation activity, with T2-TrpRS being the exception as it lacks this enzymatic function. In terms of angiostatic activity, Isoform 2, T1-TrpRS, and T2-TrpRS exhibit this property, while Isoform 1 does not possess angiostatic capabilities. Particularly, T2-TrpRS stands out by inhibiting fluid shear stress-activated responses in endothelial cells. WARS plays a pivotal role in regulating key signaling pathways, including ERK, Akt, and eNOS activation, which are associated with angiogenesis, cytoskeletal reorganization, and the expression of genes responsive to shear stress. This multifaceted functionality underscores WARS's involvement in intricate cellular processes and its potential impact on vascular responses.

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