MMGT1 Protein, Human (HEK293, His)

Cat. No.:	HY-P77087
Synonyms:	ER membrane protein complex subunit 5; Transmembrane protein 32; EMC5; TMEM32
Species:	Human
Source:	HEK293
Accession:	Q8N4V1 (E66-R131)
Gene ID:	93380
Molecular Weight:	23-29 kDa

PROPERTIES

Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 μm filtered solution of PBS, pH 7.4. 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	MMGT1 protein is an essential component of the endoplasmic reticulum membrane protein complex (EMC), playing a crucial role in the energy-independent insertion of newly synthesized membrane proteins into endoplasmic reticulum (ER) membranes. It exhibits a preference for accommodating proteins with transmembrane domains that possess weak hydrophobicity or contain destabilizing features, such as charged and aromatic residues. MMGT1 is actively involved in both cotranslational and post-translational insertion processes. In cotranslational insertion, it facilitates the proper positioning of N-terminal transmembrane domains in an N-exo topology, ensuring the translocated N-terminus resides in the ER lumen, particularly impacting the topology of multi-pass membrane proteins like G protein-coupled receptors. Moreover, MMGT1 indirectly influences various cellular processes by regulating the insertion of diverse proteins into membranes. Additionally, it is implicated in Mg(2+) transport and operates as a key constituent of the EMC.

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