TIM-14 Protein, S.cerevisiae

Cat. No.:	HY-P71366
Synonyms:	Mitochondrial import inner membrane translocase subunit TIM14; Presequencetranslocated associated motor subunit PAM18; PAM18; TIM14
Species:	Others
Source:	E. coli
Accession:	Q07914 (F99-K168)
Gene ID:	850694
Molecular Weight:	Approximately 9.0 kDa

PROPERTIES

AA Sequence	F L K G G F D P K M N S K E A L Q I L N L T E N T L T K K K L K E V H R K I M L A N H P D K G G S P F L A T K I N E A K D F L E K R G I S K
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 μm filtered solution of 20 mM Tris, 300 mM NaCl, pH 8.0.
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. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
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	TIM-14 stands as an indispensable constituent of the PAM complex, a pivotal assembly instrumental in the ATP-dependent translocation of transit peptide-containing proteins from the inner mitochondrial membrane into the mitochondrial matrix. Within this intricate molecular machinery, TIM-14 assumes a critical role in stimulating the activity of mtHSP70 (SSC1). It engages in a dynamic existence, forming homodimers and heterodimers with PAM16/TIM16. While homodimerization might not hold significance in vivo, the formation of heterodimers proves to be essential for the nuanced regulation of mtHSP70 activity. As an integral part of the larger PAM complex, TIM-14 collaborates seamlessly with mtHsp70, MGE1, TIM44, PAM16, PAM17, and PAM18/TIM14, collectively contributing to the orchestration of mitochondrial protein translocation. Additionally, TIM-14 establishes direct interactions with mtHsp70, reinforcing its role in the intricate network of molecular associations involved in ensuring the efficiency and precision of mitochondrial protein translocation. Furthermore, its direct interaction with the TIM17 subunit of the TIM23 complex adds another layer of complexity to its involvement in

	mitochondrial protein transport processes.

Caution: Product has not been fully validated for medical applications. For research use only.

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