

TIM14 Protein, *S. cerevisiae*, Recombinant

General Information

Synonyms:	Mitochondrial import inner membrane translocase subunit TIM14;TIM14; Presequencetranslocated-associated motor subunit PAM18;PAM18
Protein Construction:	Phe99-Lys168
Species:	<i>S. cerevisiae</i>
Expression Host:	<i>E. coli</i>
Accession:	Q07914
Molecular Weight:	9 KDa (reducing condition)
AA Sequence:	Phe99-Lys168

QC Testing

Biological Activity:	Activity has not been tested. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	Greater than 95% as determined by reducing SDS-PAGE. (QC verified)
Endotoxin:	< 0.1 ng/μg (1 EU/μg) as determined by LAL test.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing 20 mM Tris-HCl, 300 mM NaCl, pH 8.0.

Preparation and Storage

Reconstitution:

Reconstitute the lyophilized protein in distilled water. The product concentration should not be less than 100 μg/ml. Before opening, centrifuge the tube to collect powder at the bottom. After adding the reconstitution buffer, avoid vortexing or pipetting for mixing.

Stability & Storage:

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

Mitochondrial import inner membrane translocase subunit TIM14 (TIM14) is an essential component of the PAM complex. PAM complex is required for the translocation of transit peptide-containing proteins from the inner membrane into the mitochondrial matrix in an ATP-dependent manner. In the complex, TIM14 is required to stimulate activity of mtHSP70 (SSC1). TIM14 belongs to the DnaJ family, which has been involved in Hsp40/Hsp70

chaperone systems. As a mitochondrial chaperone, TIM14 functions as part of the TIM23 complex import motor to facilitate the import of nuclear-encoded proteins into the mitochondria. TIM14 also complexes with prohibitin complexes to regulate mitochondrial morphogenesis, and has been implicated in dilated cardiomyopathy with ataxia.

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