

TIM Protein, Human (His)

Cat. No.:	HY-P71364
Synonyms:	Triosephosphate Isomerase; TIM; Triose-Phosphate Isomerase; TPI1; TPI
Species:	Human
Source:	E. coli
Accession:	P60174 (M1-Q249)
Gene ID:	7167
Molecular Weight:	Approximately 30.0 kDa

PROPERTIES

AA Sequence	<pre> M A P S R K F F V G G N W K M N G R K Q S L G E L I G T L N A A K V P A D T E V V C A P P T A Y I D F A R Q K L D P K I A V A A Q N C Y K V T N G A F T G E I S P G M I K D C G A T W V V L G H S E R R H V F G E S D E L I G Q K V A H A L A E G L G V I A C I G E K L D E R E A G I T E K V V F E Q T K V I A D N V K D W S K V V L A Y E P V W A I G T G K T A T P Q Q A Q E V H E K L R G W L K S N V S D A V A Q S T R I I Y G G S V T G A T C K E L A S Q P D V D G F L V G G A S L K P E F V D I I N A K Q </pre>
Appearance	Solution.
Formulation	Supplied as a 0.2 µm filtered solution of 20 mM Tris-HCl, 1 mM DTT, 10% Glycerol, pH 8.0.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	N/A
Storage & Stability	Stored at -80°C for 1 year. It is stable at -20°C for 3 months after opening. It is recommended to freeze aliquots at -80°C for extended storage. Avoid repeated freeze-thaw cycles.
Shipping	Shipping with dry ice.

DESCRIPTION

Background	<p>Triosephosphate isomerase (TIM) stands out as an exceptionally efficient metabolic enzyme crucial for catalyzing the rapid interconversion between dihydroxyacetone phosphate (DHAP) and D-glyceraldehyde-3-phosphate (G3P) in the central pathways of glycolysis and gluconeogenesis. Beyond its pivotal role in glucose metabolism, TIM assumes an additional responsibility in the production of methylglyoxal, a reactive and cytotoxic side-product. Methylglyoxal exhibits the potential to modify and induce alterations in proteins, DNA, and lipids, emphasizing the dual nature of TIM's involvement in fundamental metabolic processes and the generation of cytotoxic byproducts.</p>
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Caution: Product has not been fully validated for medical applications. For research use only.

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