

Recombinant human TPI1 protein

Catalog Number: ATGP3489

PRODUCT INFORMATION

Expression system

E.coli

Domain

1-249aa

UniProt No.

P60174

NCBI Accession No.

NP_000356

Alternative Names

triosephosphate isomerase, TPI

PRODUCT SPECIFICATION

Molecular Weight

28.8 kDa (269aa) confirmed by MALDI-TOF

Concentration

0.5mg/ml (determined by Bradford assay)

Formulation

Liquid in. 20mM Tris-HCl buffer (pH 8.0) containing 10% glycerol, 1mM DTT

Purity

> 95% by SDS-PAGE

Endotoxin level

< 1 EU per 1ug of protein (determined by LAL method)

Biological Activity

Specific activity is > 3000unit/mg, in which one unit will convert 1.0 umole of D-glyceraldehyde-3-phosphate to dihydroxyacetone phosphate per minute at pH 7.5 at 25C.

Tag

His-Tag

Application

Enzyme Activity, SDS-PAGE

Storage Condition

Can be stored at +2C to +8C for 1 week. For long term storage, aliquot and store at -20C to -80C. Avoid repeated freezing and thawing cycles.

BACKGROUND

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Description

TPI1 (Triosephosphate isomerase) belongs to the triosephosphate isomerase family. TPI1 catalyzes the isomerization of glyceraldehydes 3-phosphate (G3P) and dihydroxy-acetone phosphate (DHAP) in glycolysis and gluconeogenesis. Defects in TPI1 are the cause of triosephosphate isomerase deficiency (TPI deficiency). TPI deficiency is an autosomal recessive disorder. It is the most severe clinical disorder of glycolysis. It is associated with neonatal jaundice, chronic hemolytic anemia, progressive neuromuscular dysfunction, cardiomyopathy and increased susceptibility to infection. Recombinant human TPI1 protein, fused to His-tag at N-terminus, was expressed in E. coli and purified by using conventional chromatography techniques.

Amino acid Sequence

MGSSHHHHHH SGLVPRGSH MAPSRKFFVG GNWKMNGRKQ SLGELIGTLN AAKVPADTEV VCAPPTAYID FARQKLDPKI AVAAQNCYKV TNGAFTGEIS PGMKDCGAT WVVLGHSERR HVFGESDELI GQKVAHALAE GLGVIACIGE KLDEREAGIT EKVVFEQTKV IADNVKDWSK VVLAYEPVWA IGTGKTATPQ QAQEVHEKLR GWLKSNVSDA VAQSTRIIYG GSVTGATCKE LASQPDVDGF LVGGASLKPE FVDIINAKQ

General References

Maquat L.E., et al. (1985) J. Biol. Chem. 260:3748-3753.
Rodriguez-Almazan C, et al.(2008) J Biol Chem. 2283(34):23254-63.

DATA

SDS-PAGE



3ug by SDS-PAGE under reducing condition and visualized by coomassie blue stain.

15% SDS-PAGE (3ug)