TSTA3 Protein, Human (His)

Cat. No.:	HY-P71390
Synonyms:	GDP-L-Fucose Synthase; GDP-4-Keto-6-Deoxy-D-Mannose-3; 5-Epimerase-4-Reductase; Protein FX; Red Cell NADP(H)-Binding Protein; Short-Chain Dehydrogenase/Reductase Family 4E Member 1; TSTA3; SDR4E1
Species:	Human
Source:	E. coli
Accession:	Q13630 (M1-K321)
Gene ID:	7264
Molecular Weight:	Approximately 40.0 kDa

PROPERTIES

AA Sequence	M G E P Q G S M R I L V T G G S G L V G K A I Q K V V A D G A G L P G E D W V F V S S K D A D L T D T A Q T R A L F E K V Q P T H V I H L A A M V G G L F R N I K Y N L D F W R K N V H M N D N V L H S A F E V G A R K V V S C L S T C I F P D K T T Y P I D E T M I H N G P P H N S N F G Y S Y A K R M I D V Q N R A Y F Q Q Y G C T F T A V I P T N V F G P H D N F N I E D G H V L P G L I H K V H L A K S S G S A L T V W G T G N P R R Q F I Y S L D L A Q L F I W V L R E Y N E V E P I I L S V G E E D E V S I K E A A E A V V E A M D F H G E V T F D T T K S D G Q F K K T A S N S K L R T Y L P D F R F T P F K Q A V K E T C A W F T D N Y E Q A R K
Biological Activity	The enzyme activity of this recombinant protein is testing in progress, we cannot offer a guarantee yet.
Appearance	Solution.
Formulation	Supplied as a 0.2 µm filtered solution of 20 mM Tris, 150 mM NaCl, pH 8.0.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconsititution	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	TSTA3, also known as GDP-L-fucose synthase, is an enzyme responsible for the two-step NADP-dependent conversion of GDP-4-dehydro-6-deoxy-D-mannose to GDP-fucose. This enzymatic process involves both an epimerase and a reductase

reaction. In the first step, the epimerase activity facilitates the conversion of GDP-4-dehydro-6-deoxy-D-mannose to an intermediate, and in the subsequent reductase reaction, this intermediate is further reduced to yield GDP-fucose. GDP-fucose is a critical nucleotide sugar that serves as a precursor in the biosynthesis of fucosylated glycans. Fucosylation plays pivotal roles in various biological processes, including cell adhesion, immune response, and signaling. The catalytic function of TSTA3 in the synthesis of GDP-fucose highlights its importance in the regulation of glycan structures and their involvement in diverse cellular functions.

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

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