

Recombinant Human TSTA3, His-tagged

Cat. No. TSTA3-2763H Lot. No. (See product label)

SPECIFICATION

Product Overview Recombinant human TSTA3 protein, fused to His-tag at N-terminus, was expressed in *E. coli* and purified by using conventional chromatography techniques.

Species Human

Source E.coli

Description TSTA3 is a NADP(H)-binding protein. It catalyzes the two-step epimerase and the reductase reactions in GDP-D-mannose metabolism, converting GDP-4-keto-6-D-deoxymannose to GDP-L-fucose. GDP-L-fucose is the substrate of several fucosyltransferases involved in the expression of many glycoconjugates, including blood group ABH antigens and developmental adhesion antigens. Mutations in this gene may cause leukocyte adhesion deficiency, type II.

Purity > 90% by SDS – PAGE.

Sequences

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MGSSHHHHHH SSGLVPRGSH MGEPQGSMRI LVTGGGSLVG KAIQKVADG
AGLPGEDWVF VSSKDADLTD TAQTRALFEK VQPTHVIHLA AMVGGLFRNI
KYNLDFWRKN VHMNDNLVLS AFEVGARKVV SCLSTCIFPD KTTYPIDETM
IHNGPPHNSN FGYSYAKRMI DVQNRAYFQQ YGCTFTAVIP TNVFGPHDNF
NIEDGHVLPGLIHKVHLAKS SGSALTVWGT GNPRRQFIYS LDLAQLFIWV
LREYNEVEPI ILSVGEEDEV SIKEAAEAVV EAMDFHGEVT FDTTKSDGQF
KKTASNSKLR TYLPDFRFTP FKQAVKETCA WFTDNYEQAR K.
    
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Molecular Weight 38.0 kDa (341aa) confirmed by MALDI-TOF.

 Tel: 1-631-559-9269 1-516-512-3133

 Email: info@creative-biomart.com  Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

| | |
|----------------------|---|
| Form | Liquid. 20mM Tris-HCl buffer (pH8.0) containing 10% glycerol, 2mM DTT, 50mM NaCl. |
| Concentration | 0.5 mg/ml (determined by Bradford assay). |
| Storage | Can be stored at +4°C short term (1-2 weeks). For long term storage, aliquot and store at -20°C or -70°C. Avoid repeated freezing and thawing cycles. |

GENE INFORMATION

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|-----------------------|--|
| Gene Name | TSTA3 tissue specific transplantation antigen P35B [Homo sapiens] |
| Synonyms | TSTA3; tissue specific transplantation antigen P35B; 3-5 epimerase/4-reductase; GDP-4-keto-6-deoxy-D-mannose epimerase-reductase; GDP-4-keto-6-deoxy-D-mannose-3,5-epimerase-4-reductase; GDP-L-fucose synthase; Tissue-specific transplantation antigen-3; protein FX; red cell NADP(H)-binding protein; short chain dehydrogenase/reductase family 4E, member 1; short-chain dehydrogenase/reductase family 4E member 1; tissue specific transplantation antigen 3; FX; P35B; SDR4E1; EC 1.1.1.271 |
| Gene ID | 7264 |
| mRNA Refseq | NM_003313 |
| Protein Refseq | NP_003304 |
| MIM | 137020 |
| UniProt ID | Q13630 |
| Chromosome | 8q24.3 |

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Location**Pathway**

Amino sugar and nucleotide sugar metabolism;Fructose and mannose metabolism;Metabolic pathways

Function

GDP-4-dehydro-D-rhamnose reductase activity; GDP-L-fucose synthase activity; catalytic activity; electron carrier activity; oxidoreductase activity

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