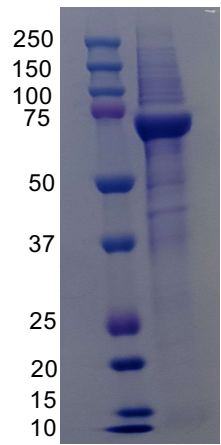


Product Name	Galactoside alpha-(1,2)-fucosyltransferase 2 (FUT2)
Catalog Number	#0037
Alternate Names	Alpha(1,2)FT 2 Fucosyltransferase 2 GDP-L-fucose:beta-D-galactoside 2-alpha-L-fucosyltransferase 2 SE2 Secretor blood group alpha-2-fucosyltransferase
Substrate Specificity	Catalyzes the transfer of L-fucose, from a GDP-fucose, to the terminal galactose on both O- and N-linked glycans chains of cell surface glycoproteins and glycolipids and the resulting epitope regulates several processes such as cell-cell interaction including host-microbe interaction, cell surface expression and cell proliferation. Preferentially fucosylates gangliosides GA1 and GM1 in the antrum, cecum and colon and in the female reproductive organs (By similarity). Fucosylated host glycoproteins or glycolipids mediate interaction with intestinal microbiota influencing its composition. Creates a soluble precursor oligosaccharide (H antigen) which is an essential substrate for the final step in the soluble ABO blood group antigen synthesis pathway.
References	(PubMed:7876235, PubMed:8018146, PubMed:12692541, PubMed:22068912, PubMed:21625510, PubMed:24733310)
Expression Host	HEK293
Species of expressed protein	Human
Gene ID	2524
Protein RefSeq	NP_000502.4
Uniprot	Q10981
Region Expressed	AA 34-343
Expressed Protein Sequence	KIQAMWELPVQIPVLASTSKALGPSQLRGMWTINAIGRLGNQMGEYATLYALAKMNGRPAFI PAQMHSTLAPIFRITLPVLHSATASRIPWQNYHLNDWMEEYRHFPGYVRFYGYPCSWTFY HHLRQEILQEFTLHDHVREEAQKFLRGLQVNGSRPGTFVGVHVRGDIYVHMPKVWKGVV ADRRYLQQALDWFRARYSSLIFVVTSGMAWCRENIDTSHGDVVFAGDGI EGSPAKDFALL TQCNHTIMTIGTFGIWAAYLTGGDTIYLANYTLPDSPFLKIFKPEAAFLPEWTGIAADLSPLLKH
Tag(s)	N-terminal 6xHis, GFP
Specific Activity	
Purity (%)	>95%, by SDS-PAGE as visualized by Coomassie Blue Staining
Formulation	Supplied as a 0.2µm filtered solution in 20mM HEPES pH 7.0 and 100mM NaCl buffer, with 10% Glycerol and 0.05 % NaN ₃ as preservative.
Concentration	1 mg/ml
SDS-Page Size	65-70 kDa

SDS-PAGE image



Activity	Measured by the ability to transfer the sugar from GDP-Fucose and generate GDP
Assay Buffer	Universal Buffer: 250mM each MES, MOPS, TRIS, pH 7.5
Donor Substrate	GDP-Fucose (200mM, from Carbosynth)
Acceptor Substate	1mM LNnT (Acceptor can be Type 2, H type2, Sialyl Type 2)
Coupling Enzyme	GDP-Glo™ Glycosyltransferase Assay (Promega)
Detection Kit	
Assay Steps	Prepare 10µl of reaction mixture containing 250mM of Universal Buffer(MES, MOPS, 1) Incubate at 37°C for 30 min. 2) Put the sample on ice immediately and then transfer 5 µLof reaction mixture into 384-well 3) Incubate for 60 min at room temperature and read the plate using a GloMax Multi Detection System plate reader (Promega) 4) Follow protocol for "Generating a Standard Curve for GDP" in the GDP-Glo™ Glycosyltransferase Assay Technical Manual (Promega) Note: Use Universal buffer (250mM each MES, MOPS, TRIS, pH 7.5)
Std Curve	
Specific Actifity calc	Specific Activity (umol/min/mg)= GDP released*(umol) / [Incubation time (min) x amount of enzyme (mg)], Specific Activity was calculated using the standard curve plotted in GraphPad Prism 6 (GraphPad Software)
Shipping conditions	This product is shipped as 0.2µm filtered product on dry ice. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage cond 6 months	6 months if stored at -80C. Avoid repeated freeze thaws.