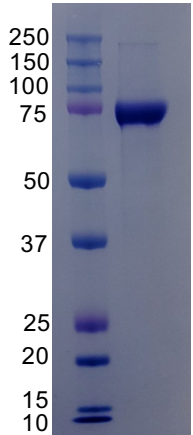


Product Name	Recombinant Human alpha-(1,3)-fucosyltransferase 5 (FUT5)
Catalog Number	#0009
Alternate Names	alpha-(1,3)-fucosyltransferase 5; alpha (1,3) fucosyltransferase; fucT-V; fucosyltransferase V; galactoside 3-L-fucosyltransferase
Substrate Specificity	Human Alpha3/4-Fucosyltransferase 5 (FUT5) can utilize both type 1 and type 2 poly- <i>N</i> -acetylactosamine substrates and has activity as an α 1,3/4 fucosyltransferase [1].
References	References: [1] Kannagi, R. (2013) "Fucosyltransferase 5. GDP-Fucose Lactosamine α 3/4-Fucosyltransferase (FUT5)" in Handbook of Glycosyltransferases and Related Genes, 2nd edition.
Expression Host	HEK293
Species of expressed protein	Human
Gene ID	2527
Protein RefSeq	NP_002025
Uniprot	Q11128
Region Expressed	AA 40-374
Expressed Protein Sequence	DATGSPRPGLMAVEPVTGAPNGSRCQDSMATPAHPTLLILLWTWPFNTPVALPRCSEMVP GAADCNITADSSVYPQADAVIVHHWDIMYNPSANLPPPTRPQGQRWIWFSMESPSNCRHLE ALDGYFNLTMSYRSDSDIFTPYGWLEPWGQPAHPPLNLSAKTELVAWAWSNWKPDARS YYQSLQAHLKVDVYGRSHKPLPKGTMMETLSRYKFYLAFENSLHPDYITEKLWRNALEAWA VPVVLGPSRSNYERFLPPDAFHVDDFQSPKDLARYLQELDKDHARYLSYFHWRETLRPRS FSWALAFCKACWKLQQESRYQTVRSIAAWFT
Tag(s)	N-terminal 6xHis, GFP
Specific Activity	Specific Activity is ≥ 0.05 $\mu\text{mol}/\text{min}/\text{mg}$, as measured under the conditions with L _N T
Purity (%)	>95%, by SDS_PAGE under reducing conditions and visualized by Coomassie Blue stain.
Formulation	Supplied as a 0.2 μm filtered solution in 20mM HEPES and 100mM NaCl buffer, pH 7.0, with 10% Glycerol and 0.05 % NaN ₃ as preservative.
Concentration	1 mg/ml
SDS-Page Size	~70-75kDa
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 1 & 2, H type1, H type2, Sialyl Type 1 & 2, PNP-LacNAc)
Detection Kit	GDP-Glo™ Glycosyltransferase Assay (Promega)
Assay Steps	1) Prepare 10μl of reaction mixture containing 250mM of Universal Buffer(MES, MOPS, TRIS), pH 7.5, GDP-Fuc (200mM) as donor, 1 mM of an acceptor and purified GFP-FUT5 in a microfuge tube. 2) Incubate at 37°C for 30 min. 3) Put the sample on ice immediately and then transfer 5 μL of reaction mixture into 384-well assay plates and add equal volume of GDP Detection Reagent (5μL) 4) Incubate for 60 min at room temperature and read the plate using a GloMax Multi Detection System plate reader (Promega)
Std Curve	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).
Specific Activity 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.