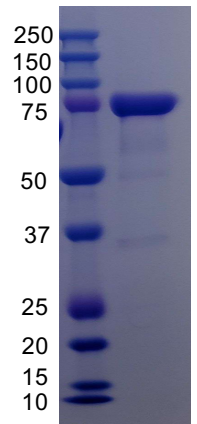


Product Name	Recombinant Mannosyl (Alpha-1,3)-glycoprotein Beta-1,2-N-Acetylglucosaminyltransferase (MGAT1)
Catalog Number	#0015
Alternate Names	N-glycosyl-oligosaccharide-glycoprotein N-acetylglucosaminyltransferase I, GNT-I, GlcNAc-T I
Substrate Specificity	Human Mannosyl (Alpha-1,3)-glycoprotein Beta-1,2-N-Acetylglucosaminyltransferase (MGAT1) transfers GlcNAc from UDP-GlcNAc to the terminal α 1,3-linked Man in $\text{Man}_5\text{GlcNAc}_2\text{Asn}$ to initiate the synthesis of hybrid and complex <i>N</i> -linked glycans.
References	References: [1] Stanley, P. (2013) "Mannosyl (Alpha-1,3)-glycoprotein Beta-1,2-N-Acetylglucosaminyltransferase (MGAT1)" in Handbook of Glycosyltransferases and Related Genes, 2nd edition.
Expression Host	HEK293
Species of expressed protein	Human
Gene ID	4245
Protein RefSeq	NP_001108090
Uniprot	P26572
Region Expressed	AA 30-445
Expressed Protein Sequence	TRPAPGRPPSVSALDGDPA SLTREVIRLAQDAEVELERQ RGLLQQIGDALSSQRGRVPTAAP PAQPRVPVTPAPAVIPILVIACDRSTVRRCLDKLLHYRPSAELFPIIVSQDCGHEETAQAIASYG SAVTHIRQPDLSIAVPPDHRKFQGYGKIARHYRWALGQVFRQFRFPAAVVVEDDLEVAPDFF EYFRATYPLLKADPSLWCVSAWNDNGKEQMVDASRPELLYRTDFFPGLGWLLLAELWAELE PKWPKAFWDDWMRRPEQRQGRACIRPEISRTMTFGRKGVSHGQFFDQHLKFIKLNQQFVHF TQLDLSYLQREAYDRDFLARVYGAPQLQVEKVRTNDRKELGEVRVQYTGRDSFKAFKALG VMDDLKSGVPRAGYRGIVTFQFRGRRVHLAPPPTWEGYDPSWN
Tag(s)	N-terminal 6xHis, GFP
Purity (%)	>95%, by SDS_PAGE under reducing conditions and visualized by Coomassie Blue stain.
Formulation	Supplied as a 0.2 μ m 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	~78 kDa
SDS-PAGE image	

Activity	Measured by the ability to transfer the sugar from UDP-GlcNAc and generate UDP
Assay Buffer	100mM HEPES, pH 7.4, 1mg/ml BSA, 2mM MnCl_2
Donor Substrate	UDP-GlcNAc
Acceptor Substrate	$\text{Man}\alpha 1,3\text{Man}\alpha 1,6(\text{Man}\alpha 1,6\text{Man}\alpha 1,3)\text{Man}\beta 1,4\text{GlcNAc}\beta 1,4\text{GlcNAc}\beta 1\text{Asn}$
Detection Kit	UDP-Glo™ Glycosyltransferase Assay (Promega)
Std Curve	Follow protocol for "Generating a Standard Curve for UMP" in the UDP-Glo™ Glycosyltransferase Assay Technical Manual (Promega)
Specific Activity calculation	Specific Activity (umol/min/mg)= UDP 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 conditions: 6 months	6 months if stored at -80C. Avoid repeated freeze thaws.