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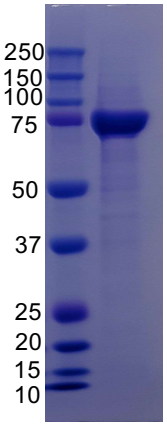
Product Name	Recombinant Human N-Acetyllactosaminide Beta-1,6-*N*-Acetylglucosaminyl-Transferase (GCNT2B)
Catalog Number	#0011
Alternate Names	I-branching enzyme, IGNT
Substrate Specificity	Human N-Acetyllactosaminide Beta-1,6-N-Acetylglucosaminyl-Transferase (GCNT2) transfers GlcNAc from UDP-GlcNAc to a galactose residue of poly-N-acetyl-lactosamine to form a branched I-antigen structure.
References	References: [1] Fakuda, M. and Suzuki-Anekoji, M. (2013) "N-Acetyllactosaminide Beta-1,6-NAcetylglucosaminyl- Transferase (GCNT2) (IGnT)" in Handbook of Glycosyltransferases and Related Genes, 2nd edition.
Expression Host	HEK293
Species of expressed protein	Human
Gene ID	2651
Protein RefSeq	NP_001482
Uniprot	Q06430
Region Expressed	AA 26-400
Expressed Protein Sequence	NFGGDPSFQRLNISDPLRLTQVCTSFINGKTRFLWKNKLMIHEKSSCKEYLTQSHYITAPLSK EEADFPLAYIMVIHHHFDTFARLFRAIYMPQNIYCVHVDEKATTEFKDAVEQLLSCFPNAFLAS KMEPVVYGGISRLQADLNCIRDLSAFEVSWKYVINTCGQDFPLKTNKEIVQYLKGFKGKNITP GVLPPAHAIGRTKYVHQEHLGKELSYVIRTTALKPPPPHNLTIYFGSAYVALSREFANFVLHD PRAVDLLQWSKDTFSPDEHFWVTLNRIPGVPGSMPNASWTGNLRAIKWSDMEDRHGGCH GHYVHGICIYGNGDLKWLVNSPSLFANKFELNTYPLTVECLELRHRERTLNQSETAIQPSWY F
Tag(s)	N-terminal 6xHis, GFP
Specific Activity	Specific Activity is ≥ 0.02 µmol/min/mg, as measured under the conditions described below.
Purity (%)	>95%, by SDS_PAGE under reducing conditions and visualized by Coomassie Blue stain.
Formulation	Supplied as a 0.2µm 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	~75 kDa
SDS-PAGE image	
Activity	Measured by the ability to transfer the sugar from UDP-GlcNAc and generate UDP
Assay Buffer	Universal Buffer: 250mM each MES, MOPS, TRIS, pH 7.5
Donor Substrate	UDP-GlcNAc
Acceptor Substate	Galb1-4GlcNAcb1-3Galb1-4GlcNAcb1-6Mana1-6Manb-octyl (Ujita et al. 1999).
Detection Kit	UDP-Glo™ Glycosyltransferase Assay (Promega)

Specific Actifity calculation	Follow protocol for "Generating a Standard Curve for UDP" in the UDP-Glo™ Glycosyltransferase Assay Technical Manual (Promega) Note: Use Universal buffer (250mM each MES, MOPS, TRIS, pH 7.5). Specific Activity (umol/min/mg)= UDP released*(umol) / [Incubation time (min) x amount of enzyme (mg)]
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 if stored at -80C. Avoid repeated freeze thaws.