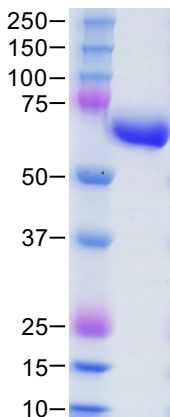


Product Name	Recombinant Human Alpha-N-acetylgalactosaminide alpha-2,6-sialyltransferase 2 (ST6GALNAC2)
Catalog Number	#0006
Alternate Names	alpha-N-acetylneuraminyl-2,3-beta-galactosyl-1,3)-N-acetyl galactosaminide alpha-2,6-sialyltransferase; sialyltransferase-like 1; sialyltransferase 7 ((alpha-N-acetylneuraminyl-2,3-beta-galactosyl-1,3)-N-acetyl galactosaminide alpha-2,6-sialyltransferase) B; alpha-N-acetylgalactosaminide alpha-2,6-sialyltransferase 2; SIAT7-B; ST6GalNAcII; sialyltransferase 7B; galNAc alpha-2,6-sialyltransferase II;ST6 (alpha-N-acetyl-neuraminyl-2,3-beta-galactosyl-1,3)-N-acetylgalactosaminide alpha-2,6-sialyltransferase 2; ST6 GalNAc alpha-2,6-sialyltransferase 2
Substrate Specificity	Human N-Acetylgalactosaminide Alpha-2,6-Sialyltransferase 2 (ST6GALNAC2) catalyzed the transfer of NeuAc to several O-linked glycans; Gal β 1-3GalNAc-O-Ser/Thr; NeuAc α 2-3Gal β 1-3GalNAc-O-Ser/Thr similar to ST6GALNAC 1, but does not utilize GalNAc-O-Ser/Thr [1].
References	References: [1] Tsuji, S. and Takashima, S. (2013) "ST6 N-Acetylgalatosaminide Alpha-2,6-Sialyltranferase 2 (ST6GALNAC2)" in Handbook of Glycosyltransferases and Related Genes, 2nd edition.
Expression Host	HEK293
Species of expressed protein	Human
Gene ID	10610
Protein RefSeq	NP_006447
Uniprot	Q9UJ37
Region Expressed	AA 68-374
Expressed Protein Sequence	SWTGKGQACRHLHLAIQRHPHFRLFNLSIPVLLWGDLFTPALWDRLSQHKAPYGWRGLS HQVIASLTSLNGSESAKLFAPPRDTPPKCIRCAVVGNGGILNGSRQGPNI DAHDYVFRNLG AVIKGFERDVGTKTSFYGFTVNTMKNSLVSYWNLGFTSVPQGQDLQYIFIPSDIRDYVMLRSA ILGVPVPEGLDKGDRPHAYFGPEASASKFKLLHPDFISYLTERFLKSKLINTHFGDLYMPSTG ALMLLTALHTCDQVSAYGFITSNYWKFSDHYFERKMKPLIFYANHDL SLEAALWRDLHKAGI LQLYQR
Tag(s)	N-terminal 6xHis, GFP
Specific Activity	Specific Activity is ≥ 0.084 $\mu\text{mol}/\text{min}/\text{mg}$, 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 0.2 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 $\mu\text{g}/\mu\text{l}$
SDS-Page Size	~65-70kDa
SDS-PAGE image	

Activity Measured by the ability to transfer the sugar from CMP-Neu5Ac and generate CMP

Assay Buffer	50mM MES, pH 6.5
Donor Substrate	CMP-Neu5Ac (300 μ M, Nacalai Tesque Inc.)
Acceptor Substate	Core 1 β 1,3 gal (0.5mM) or Asialofetuin (400 μ M, Sigma)
Detection Kit	CMP-Glo™ Glycosyltransferase Assay (Promega)
Assay Steps	<ol style="list-style-type: none"> 1) Prepare 10μl reaction mixture containing 50mM MES (pH6.5), CMP-Neu5Ac (300 μM) as donor and Asialofetuin (400 μM) as acceptor and purified GFP-ST6GALNAC2 in a microfuge tube. 2) Incubate at 37C° 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 CMP 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 CMP" in the CMP-Glo™ Glycosyltransferase Assay Technical Manual (Promega)
Specific Activity calc	Specific Activity (pmol/min/ μ g)= [CMP released*(nmol) x (1000 pmol/nmol)] / [Incubation time (min) x amount of enzyme (μ g)], Specific Activity was calculated using the standard curve plotted in GraphPad Prism 6 (GraphPad Software)
Shipping conditions	This product is shipped as 0.2 μ m 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.