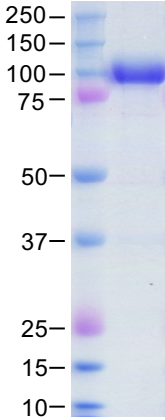


Product Name	Recombinant Human Alpha-N-acetylgalactosaminide alpha-2,6-sialyltransferase 1 (ST6GALNAC1)
Catalog Number	#0005
Alternate Names	alpha-N-acetylgalactosaminide alpha-2,6-sialyltransferase 1; sialyltransferase 7((alpha-N-acetylneuraminy-2,3-beta-galactosyl-1,3)-N-acetyl galactosaminide alpha-2,6-sialyltransferase) A; GalNAc alpha-2, 6-sialyltransferase I; SIAT7-A; ST6GalNAc I; sialyltransferase 7A; ST6 (alpha-N-acetyl-neuraminy-2,3-beta-galactosyl-1,3)-N-acetylgalactosaminide alpha-2,6-sialyltransferase 1;ST6GALNAC1, alpha-2,6-sialyltransferase 1; ST6 GalNAc alpha-2,6-sialyltransferase 1
Substrate Specificity	Human N-Acetylgalactosaminide Alpha-2,6-Sialyltransferase 1 (ST6GALNAC1) catalyzed the transfer of NeuAc to several O-linked glycans; GalNAc-O-Ser/Thr; Galβ1-3GalNAc-O-Ser/Thr; NeuAcα2-3Galβ1-3GalNAc-O-Ser/Thr [1].
References	References: [1] Tsuji, S. and Takashima, S. (2013) "ST6 N-Acetylgalatosaminide Alpha-2,6-Sialyltranferase 1 (ST6GALNAC1)" in Handbook of Glycosyltransferases and Related Genes, 2nd edition.
Expression Host	HEK293
Species of expressed protein	Human
Gene ID	55808
Protein RefSeq	AAH22462
Uniprot	Q9NSC7
Region Expressed	AA 36-600
Expressed Protein Sequence	KEPQTKPSRHQR TENIKERSLQSLAKPKSQAPTRARRTTIYAEPVPENNALNTQTQPKAHTT GDRGKEANQAPPEEQDKVPHTAQRAAWKSPEKEKTMVNTLSPRGQDAGMASGRTEAQSW KSQDTKTTQGGNGQTRKLTASRTVSEKHQGKAATTAKTLIPKSQHRMLAPTGA VSTRTRQK GVTTAVIPPKEKKPQATPPPAPFQSPPTQQRNQLKAANFKSEPRWDFEEKYSFEIGGLQTT PDSVKIKASKSLWLQKFLPNLTLFLDSRHFNQSEWDRLEHFAPPFGFMELNYSLVQKV VTR FPPVPQQQLLLASLPAGSLRCITCAVVGNGGILNNSHMGQEIDSHDYVFRLSGALIKGYEQD VGTRTSFYGFATFSLTQSLILGNRGFKNVPLGKDVRYLHFLEGTRDYEWEALLMNQTVMS KNLFWFRHRPQEA FREALHMDRYLLLHPDFLRYMKNRFLRSKTL DGAHWRIYRPTTGALLL LTALQLCDQVSAYGFITEGHERFSDHYDTSWKRLIFYINHDFKLEREVWKRLHDEGIIRLYQ RPGPGTAKAKN
Tag(s)	N-terminal 6xHis, GFP
Specific Activity	Specific Activity is ≥0.1 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 0.2 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 μg/μl
SDS-Page Size	~100kDa
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	GP from GP120 (0.5mM), or Asialofetuin (400 μ M, Sigma)
Detection Kit	CMP-Glo™ Glycosyltransferase Assay (Promega)
Assay Steps	1) Prepare 10 μl reaction mixture containing 50mM MES (pH6.5), CMP-Neu5Ac (300 μM) as donor and Asialofetuin (400 μM) as acceptor and purified GFP-ST6GALNAC1 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 (5 μL) 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.