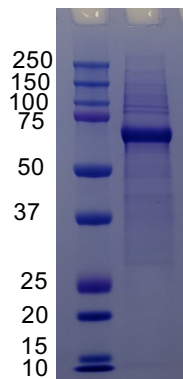


Product Name	Alpha-N-acetylgalactosaminide alpha-2,6-sialyltransferase 5 (ST6GALNAC5)
Catalog Number	#0026
Alternate Names	GD1 alpha synthase, GalNAc alpha-2,6-sialyltransferase V, ST6GalNAc V, (ST6GalNAcV), Sialyltransferase 7E (SIAT7-E)
Substrate Specificity	redominantly catalyzes the biosynthesis of ganglioside GD1alpha from GM1b in the brain, by transferring the sialyl group (N-acetyl-alpha-neuraminyI or NeuAc) from CMP-NeuAc to the GalNAc residue on the NeuAc-alpha-2,3-Gal-beta-1,3-GalNAc sequence of GM1b
References	Furukawa et al., ' ST6 N-acetylgalactosaminide Alpha-2,6- sialyltransferase 5,6 (GST6GALNAC5,6)' in Handbook of Glycosyltransferases and Related Genes, 2nd Edition
Expression Host	HEK293
Species of expressed protein	Human
Gene ID	81849
Protein RefSeq	NP_112227
Uniprot	Q9BVH7
Region Expressed	AA 50 - 336
Expressed Protein Sequence	ASATGSSSQPAAESSTQQRPGVPAGPRPLDGYLGVADHKPLKMHCRDCALVTSSGHLLHSRQ GSQIDQTECVIRMNDAPTRGYGRDVGNRRTSLRVIAHSSIQRLRNHRDLLNVSQGTVFIFWGPS SYMRRDGGKQVYNNLHLLSQVLPRLKAFMITRHKMLQFDELFKQETGKDRKISNTWLSTGWFT MTIALELCDRINVYGMVPPDFCRDPNHPSVPYHYEYEPFGPDECTMYLSHERGRKGSHHRFITE KRVFKNWARTFNIHFFQPDWKPESLAINHPENKPVF
Tag(s)	N-terminal 6xHis, GFP
Purity (%)	>95%, by SDS-PAGE as visualized by Coomassie Blue Staining
Formulation	Supplied as a 0.2µm filtered solution in 20mM HEPES pH 7.0, and 100mM NaCl buffer, with 10% Glycerol and 0.05 % NaN ₃ as preservative.
Concentration	1 mg/ml
SDS-Page Size	~70 kDa
SDS-PAGE image	



Activity	Measured by the ability to transfer the sugar from CMP-Neu5Ac and generate CMP
Assay Buffer	100mM MES, pH 7.0
Donor Substrate	CMP-Neu5Ac (200 mM, Nacalai Tesque Inc.)
Acceptor Substrate	LNT
Detection Kit	CMP-Glo™ Glycosyltransferase Assay (Promega)
Assay Steps	<ol style="list-style-type: none"> 1) Prepare 10ml reaction mixture containing 100mM MES (pH 7.0), CMP-Neu5Ac (200mM) as donor and LNT (1 mM) as acceptor and purified GFP-ST6GALNAC5 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/ug) = [CMP released* (nmol) x (1000 pmol/nmol)] / [Incubation time (min) x amount of enzyme (ug)], 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 if stored at -80C. Avoid repeated freeze thaws.