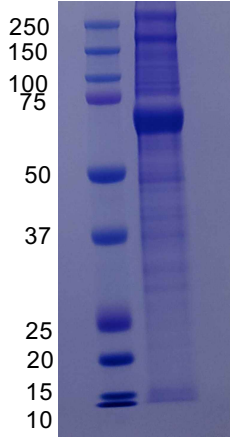


Product Name	CMP-N-acetylneuraminate-beta-1,4-galactoside alpha-2,3-sialyltransferase (ST3GAL3)
Catalog Number	#0031
Alternate Names	Beta-galactoside alpha-2,3-sialyltransferase 3 (Alpha 2,3-ST 3) Gal beta-1,3(4) GlcNAc alpha-2,3 sialyltransferase N-acetyllactosaminide alpha-2,3-sialyltransferase ST3Gal III (ST3GalIII) ST3N Sialyltransferase 6
Substrate Specificity	Catalyzes the formation of the NeuAc-alpha-2,3-Gal-beta-1,4-GlcNAc-, NeuAc-alpha-2,3-Gal-beta-1,3-GlcNAc- and NeuAc-alpha-2,3-Gal-beta-1,3-GalNAc- sequences found in terminal carbohydrate groups of glycoproteins and glycolipids. The highest activity is toward Gal-beta-1,3-GlcNAc and the lowest toward Gal-beta-1,3-GalNAc.
References	https://pubmed.ncbi.nlm.nih.gov/9184827/
Expression Host	HEK293
Species of expressed protein	Human
Gene ID	6487
Protein RefSeq	NP_001257388.1
Uniprot	Q11203
Region Expressed	AA 60-375
Expressed Protein Sequence	ELATKYANFSEGACKPGYASALMTAIFPRFSKPAPMFLDDSFRRKWARIREFVPPFGIKGQDN LIKAILSVTKEYRLTPALDSLRCRRCIIVGNGGVLANKSLGSRIDDYDIVVRLNSAPVKGFEKD VGSKTTLRITYPEGAMQRPEQYERDSLFLVLAGFKWQDFKWLKYIVYKERSASDGFWKSV TRVPKEPPEIRILNPYFIQEAAFTLIGLPFNGLMGRGNIPTLGSAVVTMALHGCDEVAVAGFG YDMSTPNAPLHYETVRMAAIKESWTHNIQREKEFLRKLVKARVITDLSSGI
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	~60-70kDa
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	LacNAc (2.4mM, Sigma)
Coupling Enzyme	CMP-Glo™ Glycosyltransferase Assay (Promega)
Detection Kit	<p>Prepare 10ml reaction mixture containing 50mM MES (pH6.5), CMP-Neu5Ac (300mM) as donor and LacNAc (2.4mM) as acceptor and purified GFP-ST3GAL4 in a microfuge tube. Incubate at 37C° for 30 min.</p> <p>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)</p> <p>Incubate for 60 min at room temperature and read the plate using a GloMax Multi Detection System plate reader (Promega)</p>
Assay Steps	
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.