ST8SIA1 Protein, Human (HEK293, His)

Cat. No.:	HY-P71334
Synonyms:	Alpha-N-Acetylneuraminide Alpha-2; 8-Sialyltransferase; Alpha-2; 8-Sialyltransferase 8A; Ganglioside GD3 Synthase; Ganglioside GT3 Synthase; Sialyltransferase 8A; SIAT8-A; Sialytransferase St8Sia I; ST8SiaI; ST8SIA1; SIAT8; SIAT8A
Species:	Human
Source:	HEK293
Accession:	Q92185 (Y49-S356)
Gene ID:	6489
Molecular Weight:	Approximately 48.0 kDa

PROPERTIES

AA Sequence	Y R L P N E K E I V Q G V L Q Q G T A W R R N Q T A A R A F R K Q M E D C C D P A H L F A M T K M N S P M G K S M W Y D G E F L Y S F T I D N S T Y S L F P Q A T P F Q L P L K K C A V V G N G G I L K K S G C G R Q I D E A N F V M R C N L P P L S S E Y T K D V G S K S Q L V T A N P S I I R Q R F Q N L L W S R K T F V D N M K I Y N H S Y I Y M P A F S M K T G T E P S L R V Y Y T L S D V G A N Q T V L F A N P N F L R S I G K F W K S R G I H A K R L S T G L F L V S A A L G L C E E V A I Y G F W P F S V N M H E Q P I S H H Y Y D N V L P F S G F H A M P E E F L Q L W Y L H K I G A L R M Q L D P C E D T S L Q P T S
Biological Activity	The enzyme activity of this recombinant protein is testing in progress, we cannot offer a guarantee yet.
Appearance	Solution.
Formulation	Supplied as a 0.2 μm filtered solution of 20mM Tris-HCl, 150 mM NaCl, pH 8.0.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	N/A
Storage & Stability	Stored at -80°C for 1 year. It is stable at -20°C for 3 months after opening. It is recommended to freeze aliquots at -80°C for extended storage. Avoid repeated freeze-thaw cycles.
Shipping	Shipping with dry ice.

DESCRIPTION

Background	ST8SIA1 protein catalyzes the addition of sialic acid in alpha 2,8-linkage to the sialic acid moiety of ganglioside GM3, leading to the formation of ganglioside GD3. Gangliosides represent a subfamily of complex glycosphingolipids characterized by the presence of one or more sialic acid residues. This enzymatic activity extends to the potential addition of a second alpha-2,8-

sialic acid to GD3, resulting in the formation of GT3. ST8SIA1 can also utilize GM1b, GD1a, and GT1b as acceptor substrates to synthesize GD1c, GT1a, and GQ1b, respectively. Notably, in breast cancer cells, ST8SIA1 exhibits the ability to synthesize unconventional tetra- and pentasialylated lactosylceramide derivatives identified as GQ3 (II3Neu5Ac4-Gg2Cer) and GP3 (II3Neu5Ac5-Gg2Cer). This diverse enzymatic repertoire underscores ST8SIA1's role in ganglioside biosynthesis, contributing to the structural complexity and functional diversity of these glycosphingolipids in cellular processes and disease contexts.

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