Recombinant SIA8A protein (His tag)

Catalog Number	538629
Synonyms	Alpha-2,8-sialyltransferase 8A; Ganglioside GD3 synthase; Ganglioside GT3 synthase; Sialyltransferase 8A; SIAT8-A; Sialyltransferase St8Sia I; ST8SiaI
Species	Human
Expression System	E. coli
Accession	Q92185
Molecular Weight	Predictes a molecular mass of 36.83 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 37 kDa band.

Product Information

Sequence Region	49-356
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>85%, by SDS-PAGE with Coomassie Brilliant Blue staining.
Endotoxin	Not tested.
Activity	Not tested.
Stability	Samples are stable for up to twelve months from date of receipt at -70℃
Protein Construction	DNA encoding 49-356 aa (Q92185) were fused with 6His tag.

Storage & Handling

Reconstitution	Reconstitute at 0.25 μg/μl in sterile water for short-term storage. Reconstitution with 50% glycerol solution is recommended for longer term storage (see Stability and Storage for more details). If a different concentration is needed for your purposes please adjust the reconstitution volume as required (please note: the ion concentration of the final solution will vary according to the volume used). Note: Centrifuge vial before opening. When reconstituting, gently pipet and wash down the sides of the vial to ensure full recovery of the protein into solution.
Storage	Store it under sterile conditions at -20℃ to -80℃. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.
Shipping	In general, recombinant proteins are provided as lyophilized powder which are shipped at ambient temperature. Bulk packages of recombinant proteins are provided as frozen liquid. They are shipped out with blue ice unless customers require otherwise.

Description

Description	This recombinant protein product features a stable and soluble fragment (residues 49-356) of human Alpha-N-acetylneuraminide alpha-2,8-sialyltransferase (ST8SiaI), optimized for structural and biochemical studies. This enzyme fragment retains the catalytic activity responsible for synthesizing key gangliosides through alpha-2,8-sialic acid linkages. Alpha-N-acetylneuraminide alpha-2,8-sialyltransferase (ST8SiaI), encoded by the ST8SIA1 gene, is a Golgi apparatus membrane-anchored enzyme that catalyzes the addition of sialic acid in alpha-2,8-linkage to ganglioside substrates. It plays a critical role in ganglioside biosynthesis, converting GM3 to GD3 and further to GT3, while also utilizing GM1b, GD1a, and GT1b to form GD1c, GT1a, and GQ1b, respectively. The enzyme's activity extends to producing unusual tetra- and pentasialylated lactosylceramide derivatives (GQ3 and GP3) in breast cancer cells, highlighting its significance in both normal glycosphingolipid metabolism and pathological contexts. As a single-pass type II membrane protein localized to the Golgi apparatus, it facilitates essential modifications to complex glycosphingolipids that influence cellular recognition and signaling processes.