Recombinant B4GN2 protein (His tag)

Catalog Number	545500
Synonyms	Sd(a) beta-1,4-GalNAc transferase; UDP-GalNAc:Neu5Aca2-3Galb-R b1,4-N-acetylgalactosaminyltransferase
Species	Human
Expression System	E. coli
Accession	Q8NHY0
Molecular Weight	Predictes a molecular mass of 55.59 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 56 kDa band.

Product Information

Sequence Region	89-566
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>87%, 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 89-566 aa (Q8NHY0) 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	Recombinant Beta-1,4 N-acetylgalactosaminyltransferase 2 (B4GALNT2) fragment (amino acids 89-566) from Homo sapiens, engineered for high solubility and stability. This fragment enables structural and biochemical studies of the enzyme's catalytic activity in synthesizing the Sd(a) histo-blood group antigen, supporting research in glycobiology and infectious disease mechanisms. Beta-1,4 N-acetylgalactosaminyltransferase 2 (B4GALNT2) is a key enzyme in glycosylation pathways, catalyzing the transfer of N-acetylgalactosamine (GalNAc) in a beta-1,4-linkage to NeuAcalpha2->3Gal-R structures, forming the Sd(a) histo-blood group antigen. This epitope is present on O- and N-linked glycoproteins and glycolipids in erythrocytes (e.g., GYPA, SLC4A1), renal fluids (UMOD/uromodulin), and mucosal tissues. The enzyme also confers protection against influenza A virus by modifying host N-glycan receptors, preventing viral entry. In cells, the full-length protein localizes to the Golgi apparatus, trans-Golgi network, and cytoplasmic vesicles as a single-pass type II membrane protein, with isoforms partially found in endosomes and lysosomes. The recombinant fragment (89-566) excludes transmembrane regions to facilitate experimental applications while retaining functional relevance.