Recombinant FUT2 protein (His tag)

Catalog Number	547235
Synonyms	1,2; Alpha(1,2)FT 2; Fucosyltransferase 2; GDP-L-fucose:beta-D-galactoside 2-alpha-L-fucosyltransferase 2; SE2; Secretor blood group alpha-2-fucosyltransferase; Secretor factor; Se; Type 1 galactoside alpha-(1,2)-fucosyltransferase FUT2; Type 2 galactoside alpha-(1,2)-fucosyltransferase FUT2
Species	Human
Expression System	E. coli
Accession	Q10981
Molecular Weight	Predictes a molecular mass of 37.41 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 37 kDa band.

Product Information

Sequence Region	29-343
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>90%, 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 29-343 aa (Q10981) 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 Human Galactoside alpha-(1,2)-fucosyltransferase 2 (FUT2) Fragment (aa 29-343) is a high-purity, soluble protein designed for structural and biochemical studies. This 315-amino acid fragment retains key functional regions, enabling researchers to investigate fucosylation mechanisms, host-microbe interactions, and blood group antigen synthesis in a stable, experimentally accessible format. Galactoside alpha-(1,2)-fucosyltransferase 2 (FUT2) is a Golgi-resident, type II membrane protein that catalyzes the transfer of L-fucose from GDP-L-fucose to terminal galactose residues on O- and N-linked glycans of cell surface glycoproteins and glycolipids. This enzyme generates the H antigen, a critical precursor in the ABO blood group antigen synthesis pathway, and regulates essential biological processes including cell-cell interactions, host-microbial communication, and cell proliferation. FUT2-mediated fucosylation of gangliosides and glycoconjugates significantly influences intestinal microbiota composition and function, highlighting its importance in mucosal immunity and host-pathogen interactions. The membrane-bound form localizes to trans cisternae of the Golgi apparatus, where it modifies glycoproteins and glycolipids destined for secretion or cell surface expression.