

Active Recombinant Human GCNT2 protein, His-tagged

Cat. No. GCNT2-01H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human GCNT2 protein, fused to His-tag at C-terminus, was expressed in CHO.
Species	Human
Source	CHO
Description	This gene encodes the enzyme responsible for formation of the blood group I antigen. The i and I antigens are distinguished by linear and branched poly-N-acetyllactosaminoglycans, respectively. The encoded protein is the I-branching enzyme, a beta-1,6-N-acetylglucosaminyltransferase responsible for the conversion of fetal i antigen to adult I antigen in erythrocytes during embryonic development. Mutations in this gene have been associated with adult i blood group phenotype. Alternatively spliced transcript variants encoding different isoforms have been described.
Form	Supplied as a 0.2 µm filtered solution in Tris and NaCl.
Bio-activity	Measured by its ability to transfer GlcNAc from UDP-GlcNAc to Cy5-labeled Extended G2. 0.25 µg of Recombinant Human GCNT2 will convert >50% of its substrate to product, as measured under the described conditions.
Molecular Mass	Predicted Molecular Mass: 43.8 kDa SDS-PAGE: 53-67 kDa, reducing conditions

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N-terminal Sequence Analysis	Asn26
Endotoxin	<1.0 EU per 1 µg of the protein by the LAL method.
Purity	> 95 %
Applications	Enzyme Activity
Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. 6 months from date of receipt, -20 to -70 centigrade as supplied. 3 months, -20 to -70 centigrade under sterile conditions after opening.
Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.

GENE INFORMATION

Gene Name	GCNT2 glucosaminyl (N-acetyl) transferase 2 (I blood group) [Homo sapiens (human)]
Official Symbol	GCNT2
Synonyms	CCAT; CTRCT13; EC 2.4.1.150; GCNT2; GCNT2C; GCNT5; I beta-1,6-N-acetylglucosaminyltransferase; I-branching beta-1; 6-acetylglucosaminyltransferase; I-branching enzyme; IGNTglucosaminyl (N-acetyl) transferase 5; II; li blood group; MGC163396; N-acetylglucosaminyltransferase; N-acetyllactosaminide beta-1; 6-N-acetylglucosaminyl-transferase; N-acetyllactosaminide beta-1; 6-N-acetylglucosaminyltransferase; NACGT1; NAGCT1; ULG3; bA360O19.2; bA421M1.1; beta-1; 6-N-acetylglucosaminyltransferase 2; cataract; congenital; glucosaminyl (N-acetyl) transferase 2; I-branching enzyme, glucosaminyl (N-acetyl) transferase 2; I-

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branching enzyme (I blood group); glucosaminyl (N-acetyl) transferase 2; I-branching enzyme (II blood group)

Gene ID 2651

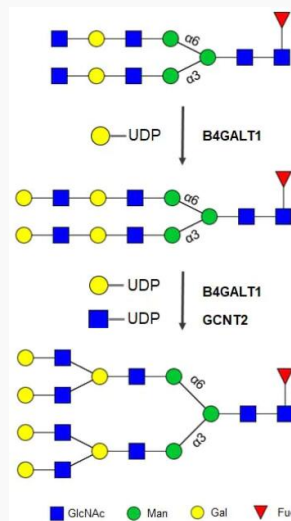
mRNA Refseq NM_001491

Protein Refseq NP_001482

MIM 600429

UniProt ID Q8N0V5

**Recombinant Human
GCNT2 His-tag
Protein/GCNT2
Enzyme Activity
Diagram.**



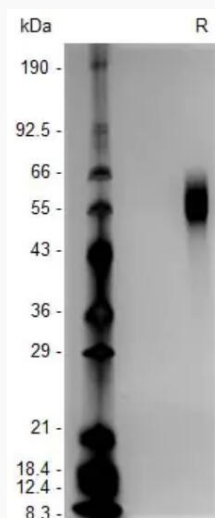
GCNT2 recognizes polylactosamine structure and can tolerate core-6 fucose and its Cy5 derivatives.

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**Recombinant Human
GCNT2 His-tag
Protein, CF SDS-
PAGE.**



1 µg/lane of Recombinant Human GCNT2 His-tag was resolved with SDS-PAGE under reducing (R) conditions and visualized by silver staining, showing bands at 53-63 kDa.

**Recombinant Human
GCNT2 His-tag
Protein, CF
Fluorescent Gel
Mobility Shift**



Lane 1 contained substrate glycan extended G2 (GL303). In the presence of

rhGCNT2, the glycan was modified, and a mobility shift was observed.