

# Recombinant Human NAGLU, His-tagged

**Cat. No.** NAGLU-1901H    **Lot. No.** (See product label)

## SPECIFICATION

|                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
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| <b>Product Overview</b>    | Recombinant Human NAGLU(Met1Trp743)fused with 6-his tag at C-terminal was expressed in CHO Cells.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Species</b>             | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Source</b>              | CHO                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>ProteinLength</b>       | 1-743 a.a.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Description</b>         | Human lysosomal $\alpha$ Nacetylglucosaminidase is a hydrolase that catalyses the removal of terminal $\alpha$ Nacetylglucosamine residues from heparan sulfate and heparin. Defects in this gene are the cause of mucopolysaccharidosis type IIIB (MPSIIIB), also known as Sanfilippo syndrome B. Mucopolysaccharidosis types IIIA, C, and D are caused by mutations in other genes involved in the lysosomal degradation of heparan sulfate. Continuous lysosomal accumulation of heparan sulfate results in the clinical combination of disease, which is typified by severe central nervous system degeneration. Mucopolysaccharidosis type III differs from other mucopolysaccharidoses in that patients usually exhibit mild somatic changes with minimal skeletal abnormalities. |
| <b>Molecular Mass</b>      | The recombinant human NAGLU predicts a molecular mass of 81 kDa. It migrates as 70-95 kDa band in SDS-PAGE under reducing conditions.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>N-terminal Sequence</b> | Asp24                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

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|--------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Formulation</b>             | Supplied as a 0.2 µm filtered solution in Tris and NaCl.                                                                                                                                    |
| <b>Purity</b>                  | >95%, by SDS-PAGE                                                                                                                                                                           |
| <b>Bio-Activity</b>            | Measured by its ability to hydrolyze 4-Nitrophenyl-N-acetyl-α-D-glucosaminide. The specific activity is >900 pmol/min/µg, as measured under the described conditions.                       |
| <b>Endotoxin Level</b>         | <1.0 EU per 1 µg of the protein by the LAL method.                                                                                                                                          |
| <b>Shipping</b>                | The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.                                                                           |
| <b>Stability &amp; Storage</b> | Use a manual defrost freezer and avoid repeated freeze-thaw cycles. 6 months from date of receipt, -20 to -70°C as supplied. 3 months, -20 to -70°C under sterile conditions after opening. |
| <b>Official Symbol</b>         | NAGLU                                                                                                                                                                                       |

## GENE INFORMATION

|                    |                                                                                                                                                                                                                                                               |
|--------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Gene Name</b>   | NAGLU N-acetylglucosaminidase, alpha [ Homo sapiens ]                                                                                                                                                                                                         |
| <b>Synonyms</b>    | NAGLU; N-acetylglucosaminidase, alpha; NAG; MPS3B; UFHSD; MPS-IIIB; alpha-N-acetylglucosaminidase; N-acetyl-alpha-glucosaminidase; EC 3.2.1.50; UFHSD1; Alpha-N-acetylglucosaminidase 77 kDa form; alpha N acetylglucosaminidase, lysosomal; ANAG_HUMAN; ANAG |
| <b>Gene ID</b>     | 4669                                                                                                                                                                                                                                                          |
| <b>mRNA Refseq</b> | NM_000263                                                                                                                                                                                                                                                     |

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| <b>Protein Refseq</b>      | NP_000254                                                                                                                                                                      |
| <b>MIM</b>                 | 609701                                                                                                                                                                         |
| <b>UniProt ID</b>          | P54802                                                                                                                                                                         |
| <b>Chromosome Location</b> | 17q21                                                                                                                                                                          |
| <b>Pathway</b>             | Glycosaminoglycan degradation; HS-GAG degradation; Heparan sulfate degradation; Heparan sulfate/heparin (HS-GAG) metabolism; Lysosome; Metabolism; Metabolism of carbohydrates |
| <b>Function</b>            | alpha-N-acetylglucosaminidase activity                                                                                                                                         |

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