

Recombinant Human IDUA therapeutic protein(Laronidase)

Cat. No. IDUA-P025H Lot. No. (See product label)

SPECIFICATION

Product Overview

Recombinant Human alpha-L-iduronidase, 628 residues (mature form), produced by recombinant DNA technology in a Chinese hamster ovary cell line. Laronidase is a glycoprotein with a molecular weight of approximately 83 kD. The predicted amino acid sequence of the recombinant form, as well as the nucleotide sequence that encodes it, are identical to a polymorphic form of human a-L-iduronidase. It contains 6 N-linked oligosaccharide modification sites.

Species Human

Source CHO

Description

This gene encodes an enzyme that hydrolyzes the terminal alpha-L-iduronic acid residues of two glycosaminoglycans, dermatan sulfate and heparan sulfate. This hydrolysis is required for the lysosomal degradation of these glycosaminoglycans. Mutations in this gene that result in enzymatic deficiency lead to the autosomal recessive disease mucopolysaccharidosis type I (MPS I). The expression product is the active ingredient of Aldurazyme.

Molecular Mass 69.9 kDa

AA Sequence

APHLVQVDAARALWPLRRFWRSTGFCPPLPHSQADQYVLSWDQQLNLAYVGAVPH
 RGIKQVRTHWLLELVT TRGSTGRGLSYNFTHLDGYLDLLRENQLLPGFELMGSASG
 HFTDFEDKQQVFEWKDLVSSLARRYIGRYGL AHVSKWNFETWNEPDHHDFFDNVS
 MTMQGFLNYYDACSEGLRAASPALRLGGPGDSFHTPPRSPLSWGLLRH CHDGTN

 Tel: 1-631-559-9269 1-516-512-3133

 Email: info@creative-biomart.com  Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

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FFTGEAGVRLDYISLHRKGARSSISILEQEKVVAQQIRQLFPKFADTPIYNDEADPLVG
WSLPQP WRADVTYAAMVVKVIAQHQNLLANTTSAFPYALLSNDNAFLSYHPHPFA
QRTLTA RFQVNNTRPPHVQLL RKPVLTA MGLLALLDEEQLWAEVSQAGTVLDSNHT
VGVLASAHRPQGPADAWRAAVLIYASDDTRAH PNRSVAVTLRLRGVPPGGLVYV
TRYLDNGLCSPDGEWRRLLGRP VFPTAEQFRRMRAAEDPVAAAPRPLPA GGRLTLR
PALRLPSLLLHVHVCARPEKPPGQVTRLRALPLTQGQLVLVWSDEHVGSKCLWTYEI
QFSQDGKA YTPVSRKPSTFNL FVFSPDTGAVSGSYRVRALDYWARPGPFSDPVPY
LEVVPVPRGPPSPGNP
    
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Endotoxin < 1.0 EU per µg of the protein

Purity >95%

Storage Can be stored at +4 centigrade short term (1-2weeks). For long term storage, aliquot and store at -20 centigrade or -70 centigrade. Avoid repeated freezing and thawing cycles.

Alias IDUA; MPS1; IDA; Laronidase

GENE INFORMATION

Gene Name IDUA iduronidase, alpha-L- [Homo sapiens]

Official Symbol IDUA

Synonyms IDUA; iduronidase, alpha-L-; alpha-L-iduronidase; MPS1; IDA;

Gene ID 3425

mRNA Refseq NM_000203

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|----------------------------|--|
| Protein Refseq | NP_000194 |
| MIM | 252800 |
| UniProt ID | P35475 |
| Chromosome Location | 4p16.3 |
| Pathway | Dermatan sulfate degradation, organism-specific biosystem; Dermatan sulfate degradation, conserved biosystem; Glycosaminoglycan degradation, organism-specific biosystem; Glycosaminoglycan degradation, conserved biosystem; Heparan sulfate degradation, organism-specific biosystem; Heparan sulfate degradation, conserved biosystem; Lysosome, organism-specific biosystem; |
| Function | L-iduronidase activity; cation binding; |

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