

Recombinant Human IDS therapeutic protein(Idursulfase)

Cat. No. IDS-P037H **Lot. No.** (See product label)

SPECIFICATION

Product Overview

Recombinant Human iduronate-2-sulfatase therapeutic protein is a purified form of human iduronate-2-sulfatase, a lysosomal enzyme. It is produced by recombinant DNA technology in a human cell line. It is an enzyme that hydrolyzes the 2-sulfate esters of terminal iduronate sulfate residues from the glycosaminoglycans dermatan sulfate and heparan sulfate in the lysosomes of various cell types. Recombinant Human iduronate-2-sulfatase therapeutic protein is a 525-amino acid glycoprotein with a molecular weight of approximately 76 kilodaltons. The enzyme contains eight asparagine-linked glycosylation sites occupied by complex oligosaccharide structures. The enzyme activity of idursulfase is dependent on the post-translational modification of a specific cysteine to formylglycine.

Species

Human

Source

HEK293

Description

It is designed to replace the natural enzyme, increasing catabolism of certain accumulated glycosaminoglycans (GAG), which abnormally accumulate in multiple tissue types in patients with mucopolysaccharidosis II (MPS-II, or Hunter syndrome).

Molecular Mass

76 kDa

AA Sequence

>heavy chainSETQANSTTDALNVLLIIVDDLRLPSLGCYGDKLVRSPNIDQLASHSLLF
QNAFAQQAVCAPSRVSFLTGRRPDTRRLYDFNSYWRVHAGNFSTIPQYFKENGYVT
MSVGKVFHPGISSNHTDDSPYSWSFPPYHPSSEKYENTKTCRGPDGELHANLLCPV

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DVLDVPEGTLDPDKQSTEQAIQLLEKMKTSASPFLLAVGYHKPHIPFRYPKEFQKLYPL
 ENITLAPDPEVPDGLPPVAYNPWMDIRQREDVQALNISVPYGPVDFQRKIRQSYFA
 SVSYLDTQVGRLLSALDDLQLANSTIIAFTSDHGWALGEHGEWAKYSNFDVATHVPL
 IFYVPGRTASLPEAGEKLFPYLDPFDSASQLMEPGRQSMDLVELVSLFPTLAGLAGL
 QVPPRCVPVPSFHVELCREGKNLLKHFRFRDLEEDPYLPG>light chainNPRELIAYSQ
 YPRPSDIPQWNSDKPSLKDIIKIMGYSIRTIDYRYTVWVGFPNDEFNANFSDIHAGELY
 FVDSPLQDHNMYNDSQGGDLFQLLMP

Endotoxin < 0.1 EU per µg of the protein

Purity >95%

Alias IDS; SIDS; MPS2; Idursulfase

GENE INFORMATION

Gene Name IDS iduronate 2-sulfatase [Homo sapiens]

Official Symbol IDS

Synonyms IDS; iduronate 2-sulfatase; SIDS; Hunter syndrome; idursulfase; iduronate 2-sulfatase 14 kDa chain; iduronate 2-sulfatase 42 kDa chain; alpha-L-iduronate sulfate sulfatase; MPS2;

Gene ID 3423

mRNA Refseq NM_000202

Protein Refseq NP_000193

MIM 300823

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UniProt ID	P22304
Chromosome Location	Xq27.3-q28
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	catalytic activity; hydrolase activity; iduronate-2-sulfatase activity; metal ion binding; sulfuric ester hydrolase activity;

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