

## 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 chainSETQANSTTDALNVLLIIVDDLRLPSLGCYGDKLVRSNPIDQLASHSLLF  
QNAFAQQAVCAPSRVSFLTGRRPDTRRLYDFNSYWRVHAGNFSTIPQYFKENGYVT  
MSVGKVFHPGISSNHTDDSPYSWSFPPYHPSSEKYENTKTCRGPDGELHANLLCPV

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DVLDVPEGTLDPDKQSTEQAIQLLEKMKTSASPFFLAVGYHKPHIPFRYPKEFQKLYPL  
 ENITLAPDPEVPDGLPPVAYNPWMDIRQREDVQALNISVPYGPPIVDFQRKIRQSYFA  
 SVSYLDTQVGRLLSALDDLQLANSTIIAFTSDHGWALGEGEWAKYSNFDVATHVPL  
 IFYVPGRTASLPEAGEKLFYLPFDSASQLMEPGRQSMDELVELVSLFPTLAGLAGL  
 QVPPRCPVPSFHVELCREGKNLLKHFRFRDLEEDPYLPG>light chainNPRELIAYSQ  
 YPRPSDIPQWNSDKPSLKDIDKIMGYSIRTIDYRYTVWVGFNPDEFLANFSDIHAGELY  
 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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<b>UniProt ID</b>	P22304
<b>Chromosome Location</b>	Xq27.3-q28
<b>Pathway</b>	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;
<b>Function</b>	catalytic activity; hydrolase activity; iduronate-2-sulfatase activity; metal ion binding; sulfuric ester hydrolase activity;

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