Recombinant Human Iduronate 2-Sulfatase/IDS Protein (His Tag)

Catalog No. PKSH031672

Note: Centrifuge before opening to ensure complete recovery of vial contents.

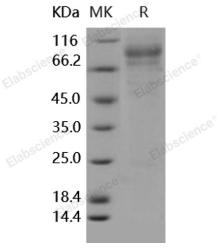
Description

Synonyms	IDS;MPS2;SIDS
Species	Human
Expression Host	HEK293 Cells
Sequence	Met 1-Pro 550
Accession	NP_000193.1
Calculated Molecular Weight	61.0 kDa
Observed molecular weight	85-95 kDa
Tag	C-His
Bioactivity	Measured by its ability to hydrolyze the substrate 4-Nitrocatechol Sulfate (PNCS). The specific activity is > 1.0 pmoles/min/μg.

Properties

Purity	> 87 % as determined by reducing SDS-PAGE.
Endotoxin	< 1.0 EU per μg of the protein as determined by the LAL method.
Storage	Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80℃. Reconstituted protein solution can be stored at 4-8℃ for 2-7 days. Aliquots of reconstituted samples are stable at < -20℃ for 3 months.
Shipping	This product is provided as lyophilized powder which is shipped with ice packs.
Formulation	Lyophilized from sterile PBS, pH 7.4 Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Please refer to the specific buffer information in the printed manual.
Reconstitution	Please refer to the printed manual for detailed information.

Data



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Background

Iduronate 2-Sulfatase, also known as IDS, is a member of the highly conserved sulfatase family of enzymes that catalyze

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Web: www.elabscience.com Email: techsupport@elabscience.com

the hydrolysis of O- and N-sulfate esters from a variety of substrates. The human Iduronate 2-Sulfatase/IDS consists of a signal peptide, a pro peptide and a mature chain that may be further processed into two chains. Among the identified 18 human sulfatases, Iduronate 2-Sulfatase/IDS is required for the lysosomal degradation of the glycosaminoglycans (GAG), heparan sulfate and dermatan sulfate. Multiple mutations in this X-chromosome localized gene result in Iduronate 2-Sulfatase/IDS enzymatic deficiency, and lead to the sex-linked Mucopolysaccharidosis Type II (MPS II), also known as Hunter Syndrome characterized by the lysosomal accumulation of the GAG and their excretion in urine. MPS II has a wide spectrum of clinical manifestations ranging from mild to severe due to the level of Iduronate 2-Sulfatase/IDS enzyme. Retroviral-mediated Iduronate 2-Sulfatase/IDS gene transfer into lymphoid cells would be a promising gene therapeutic strategy.

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