

# Recombinant Human ARSB therapeutic protein(Galsulfase)

**Cat. No.** ARSB-P038H    **Lot. No.** (See product label)

## SPECIFICATION

**Product Overview**

Recombinant Human N-acetylgalactosamine 4-sulfatase is a variant form of the polymorphic human enzyme N-acetylgalactosamine 4-sulfatase of recombinant?DNA origin. It is a glycoprotein with a molecular weight of approximately 56 kD. The recombinant protein is comprised of 495 amino acids and contains six asparagine-linked glycosylation sites, four of which carry a bis mannose-6-phosphate manose7 oligosaccharide for specific cellular recognition. Post-translational modification of Cys53 produces the catalytic amino acid residue Ca-formylglycine, which is required for enzyme activity and is conserved in all members of the sulfatase enzyme family.

**Species** Human

**ProteinLength** 495 aa

**Description**

It is a lysosomal hydrolase that catalyzes the cleavage of the sulfate ester from terminal N-acetylgalactosamine 4-sulfate residues of GAG chondroitin 4-sulfate and dermatan sulfate. Increased catabolism of GAG in turn reduces systemic dermatan sulfate accumulation, thereby reducing the primary symptoms of MPS VI.

**Molecular Mass** 56 kDa

**AA Sequence**

SGAGASRPPHLVFLADDLGWNDVGFHGSRI RTPHLDALAAGGVLLDNYYTQPLCT  
PSRSQLLTGRYQIRT GLQHQIIWPCQPSCVPLDEKLLPQLLKEAGYTTHMVGKWHL  
GMYRKECLPTRRGFDTYFGYLLGSEDYYSH ERCTLIDALNVTRCALDFRDGEEVAT  
GYKNMYSTNIFTKRAIALITNHPPEKPLFLYLALQSVHEPLQVPE EYLKPYDFIQDKN

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RHHYAGMVSLMDEAVGNVTAALKSSGLWNNTVFIFSTDNGGQTLAGGNNWPLRGR  
 KWS LWEGGVRGVGFVASPLLKQKGVKNRELIHISDWLPTLVKLARGHTNGTKPLD  
 GFDVWKTISEGSPSPRIEL LHNIDPNFVDSSPCPRNSMAPAKDDSSLPEYSAFNTSV  
 HAAIRHGNWKLLTGYPGCGYWFPSPSYN VSEIPSSDPPTKTLWLFIDIDRDPEERH  
 DLSREYPHIVTKLLSRLQFYHKHSVPVYFPAQDPRCDPKATGVW GPWM

**Endotoxin** < 0.1 EU per µg of the protein

**Purity** >95%

**Alias** ASB; G4S; MPS6; Galsulfase

## GENE INFORMATION

**Gene Name** [ARSB arylsulfatase B \[ Homo sapiens \]](#)

**Official Symbol** [ARSB](#)

**Synonyms** ASB; G4S; MPS6; arylsulfatase B

**Gene ID** [411](#)

**mRNA Refseq** [NM\\_000046](#)

**Protein Refseq** [NP\\_000037](#)

**MIM** [611542](#)

**UniProt ID** [P15848](#)

**Chromosome** 5q14.1

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|                 |                                                                                                                                                                  |
|-----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Location</b> |                                                                                                                                                                  |
| <b>Pathway</b>  | CS/DS degradation, organism-specific biosystem; Chondroitin sulfate degradation, conserved biosystem; Glycosaminoglycan degradation, organism-specific biosystem |
| <b>Function</b> | N-acetylgalactosamine-4-sulfatase activity; N-acetylgalactosamine-4-sulfatase activity; arylsulfatase activity                                                   |

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