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**Product Data Sheet**


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Product Name: ARSA Human, SF9

Cat. No.: GP21411

Batch No.: 1

**Product Data**

Purity	>98%	Source	Sf9, Baculovirus cells.
Physical Appearance	solid	Shipping Condition	Shipped with Ice Packs.

Synonyms Arylsulfatase A; Cerebroside-Sulfatase; ASA; Metachromatic Leucodystrophy; MLD; EC 3.1.6.8.

Amino Acid Sequence  
 ADPRPPNIVL IFADDLGYGD LGCYGHPSST TPNLDQLAAG GLRFTDFYVP  
 VSLCTPSRAA LLTGRLPVRM GMYPGVLVPS SRGGLPLEEVTVAEVLAARG  
 YLTGMAGKWH LGVGPEGAFI PPHQGFHRFL GIPYSHDQGP CQNLTCFPPA  
 TPCDGGCDQG LVPIPLLNL SVEAQQPWLP GLEARYMAFA HDLMADAQRQ  
 DRPFFLYYAS HHTHYQFSG QSFAERSGRG PFGDSLMEID AAVGTLMTAI  
 GDLGLLEETL VIFTADNGPETMRMSRGGCS GLLRCGKGT YEGGVREPAL  
 AFWPGHIAPG VTHELASSLD LLPTLAALAG APLPNVTLDG FDLSPLLLGT  
 GKSPRQSLFF YPSYPDEVRG VFAVRTGKYK AHFFTQGSAAH SDTTADPACH  
 ASSSLTAHEP PLYDLSKDP GENYNLLGGV AGATPEVLQA  
 LKQLQLLKAQLDAAVTFGPS QVARGEDPAL QICCHPGCTP RPACCHCPDP  
 HAHHHHHH.

Formulation ARSA protein solution (0.25mg/ml) contains Phosphate Buffered Saline (pH 7.4) and 10% glycerol.

**Introduction**

The enzyme Arylsulfatase A, also known as cerebroside-sulfatase, is responsible to break down sulfatides. The main molecule that Arylsulfatase A breaks down is cerebroside 3-sulfate intocerebrosideandsulfate. The enzyme is encoded by the ARSA gene in humans. Phosphate can form a covalent bond with the Arylsulfatase A's active site 3-oxoalanine, thus, inhibits the protein.

**Biological Activity**

Specific activity is > 2,500 pmol/min/ug, and defined as the amount of enzyme that

**Caution: Product has not been fully validated for medical applications. For research use only.**

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hydrolyze 4-Nitrocatechol at pH 5.0 at 37C.

### Stability

Store at 4°C if entire vial will be used within 2-4 weeks. Store, frozen at -20°C for longer periods of time. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Avoid multiple freeze-thaw cycles.

### Background

ARSA produced in Sf9 Baculovirus cells is a single, glycosylated polypeptide chain containing 498 amino acids (21-509a.a.) and having a molecular mass of 53.0kDa. (Molecular size on SDS-PAGE will appear at approximately 50-70kDa). ARSA is expressed with a 9 amino acid His tag at C-Terminus and purified by proprietary chromatographic techniques.

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