

# Recombinant human Arylsulfatase A/ARSA protein

Catalog Number: ATGP3826

## PRODUCT INFORMATION

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### Expression system

Baculovirus

### Domain

21-509aa

### UniProt No.

P15289

### NCBI Accession No.

NP\_000478

### Alternative Names

ASA, Cerebroside-sulfatase, metachromatic leucodystrophy(MLD)

## PRODUCT SPECIFICATION

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### Molecular Weight

53 kDa (498aa)

### Concentration

0.25mg/ml (determined by absorbance at 280nm)

### Formulation

Liquid in. Phosphate-Buffered Saline (pH 7.4) containing 10% glycerol

### Purity

> 95% by SDS-PAGE

### Endotoxin level

< 1 EU per 1ug of protein (determined by LAL method)

### Biological Activity

Specific activity is > 2,500pmol/min/ug, and defined as the amount of enzyme that hydrolyze 4-Nitrocatechol at pH 5.0 at 37C.

### Tag

His-Tag

### Application

SDS-PAGE, Enzyme Activity

### Storage Condition

Can be stored at +2C to +8C for 1 week. For long term storage, aliquot and store at -20C to -80C. Avoid repeated freezing and thawing cycles.

## BACKGROUND

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# Recombinant human Arylsulfatase A/ARSA protein

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## Description

ARSA, also known as arylsulfatase A isoform a, is a member of the sulfatase family. It hydrolyzes cerebroside sulfate, namely cerebroside 3-sulfate. It is found in many tissues, but predominantly in myelin and kidney. This protein is activated by a posttranslational modification (PTM) with the oxidation of cysteine to formylglycine. It could be helpful in diagnosis of lung and central nervous system cancer through the serum level of this protein. The ARSA deficiency results in metachromatic leukodystrophy (MLD), a lysosomal storage disease in the central and peripheral nervous systems with severe and progressive neurological symptoms. Recombinant human ARSA protein, fused to His-tag at C-terminus, was expressed in insect cell and purified by using conventional chromatography techniques.

## Amino acid Sequence

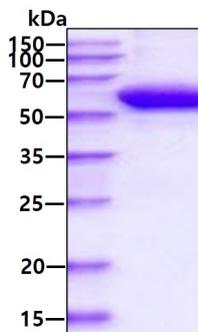
<ADP>RPPNIVL IFADDLGYGD LGCYGHPSST TPNL DQLAAG GLRFTDFYVP VSLCTPSRAA LLTGRLPVRM GMYPGVLVPS SRGGLPLEEV TVAEVLAARG YLTGMAGKWH LGVGPEGAF LPPHQGFHRFL GIPYSHDQGP CQNLTCFPPA TPCDGGCDQGLVPIPLL ANL SVEAQPWLP GLEARYMAFA HDLMADAQRQ DRPFLLYYAS HHTHYPQFSG QSFAERSGRG PFGDSLME LD AAVGTLMTAI GDLGLEETL VIFTADNGPE TMRMSRGGCS GLLRCGKGT YEGGVREPAL AFWPGHIAPG VTHELASSLD LLPTLAALAG APLPNVTL DG FDLSPLLLGT GKSPRQSLFF YPSYPDEVRG VFAVRTGKYK AHFFTQGS AH SDTTADPACH ASSSLTAHEP PLYDLSKDP GENYNLLGGV AGATPEVLQA LKQLQLLKAQ LDAAVTFGPS QVARGEDPAL QICCHPGCTP RPACCHCPDP HA<HHHHHH>

## General References

Shahzad MA., et al, (2017) J Mol Neurosci. 63:84-90.  
 Cesani M., et al, (2017) Hum Mutat. 37:16-27.

## DATA

### SDS-PAGE



3ug by SDS-PAGE under reducing condition and visualized by coomassie blue stain.