

Mouse Arylsulfatase A / ARSA Protein (His Tag)

Catalog Number: 50018-M08H



Sino Biological Inc.

Biological Solution Specialist

General Information

Gene Name Synonym:

Arsa, AS-A, ASA, AW212749, As-2, As2, C230037L18Rik, TISP73

Protein Construction:

A DNA sequence encoding the extracellular domain (Met 1-Ser 506) of mouse ARSA (NP_033843.2) precursor was expressed with a C-terminal polyhistidine tag.

Source: Mouse

Expression Host: Human Cells

QC Testing

Purity: > 97 % as determined by SDS-PAGE

Bio-Activity

Measured by its ability to cleave p-Nitrocatechol Sulfate (PNCS) . The specific activity is >100 pmoles/min/μg .

Endotoxin:

< 1.0 EU per μg of the protein as determined by the LAL method

Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

Predicted N terminal: Ser 18

Molecular Mass:

The secreted recombinant mouse ARSA consists of 500 amino acids and has a calculated molecular mass of 53.5 kDa. As a result of glycosylation, the recombinant protein migrates as an approximately 60 kDa protein in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile 25mM Tris, 0.15mM NaCl, pH 7.4

Normally 5 % - 8 % trehalose and mannitol are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

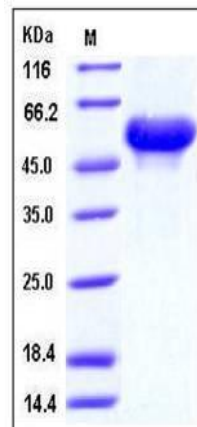
Usage Guide

Storage:

Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

SDS-PAGE:



Reconstitution:

Detailed reconstitution instructions are sent along with the products.

Protein Description

Arylsulfatase A (ARSA) is synthesized as a 52KDa lysosomal enzyme, and its major natural substrate is cerebroside 3-sulfate which is the constituent of the myelin sheet and is presented to the enzyme as complex with the sphingolipid activator protein B. ARSA forms dimers after receiving three N-linked oligosaccharides in the endoplasmic reticulum, and then the dimers are transported to the Golgi where they receive mannose 6-phosphate recognition markers. And thus, ARSA is transported and delivered to dense lysosomes in a mannose 6-phosphate receptor-dependent manner. It has been shown that within the lysosomes, the ARSA dimers can oligomerize to an octamer in a pH-dependent manner. The ARSA deficiency leads to metachromatic leucodystrophy (MLD), a lysosomal storage disorder associated with severe and progressive demyelination in the central and peripheral nervous system.

References

1. Stein, C. et al., 1989, J. Biol. Chem. 264: 12
2. Schmidt, B. et al., 1995, Cell. 82: 271-278.
3. Lukatela, G. et al., 1998, Biochemistry. 37: 3654-3664.
4. von Bulow, R. et al., 2002, J. Biol. Chem. 277: 9455-9461.
5. Barth, M.L. et al., 1995, Hum. Mutat. 6: 170-176.

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