

ASA (C-12): sc-79845

BACKGROUND

ASA (arylsulfatase A), also known as cerebroside-sulfatase, ARSA or MLD, is a 507 amino acid lysosomal protein that belongs to the sulfatase family. Functioning as a homodimer at a neutral pH and as a homo-octamer at an acidic pH, ASA uses magnesium as a cofactor to catalyze the H₂O-dependent hydrolysis of cerebroside 3-sulfate to cerebroside and sulfate. Defects in the gene encoding ASA are a cause of metachromatic leukodystrophy (MLD), an intralysosomal storage disease that is characterized by ataxias, dementia, seizures, spastic tetraparesis and, ultimately, death. Additionally, defects in ASA activity are associated with multiple sulfatase deficiency (MSD), a disorder that results in decreased activity of all known sulfatases and is generally characterized by metachromatic leukodystrophy, mucopolysaccharidosis, chondrodysplasia punctata, hydrocephalus, ichthyosis, neurologic deterioration and developmental delay.

REFERENCES

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4. Biffi, A., et al. 2006. Gene therapy of metachromatic leukodystrophy reverses neurological damage and deficits in mice. *J. Clin. Invest.* 116: 3070-3082.
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6. Consiglio, A., et al. 2007. Metabolic correction in oligodendrocytes derived from metachromatic leukodystrophy mouse model by using encapsulated recombinant myoblasts. *J. Neurol. Sci.* 255: 7-16.
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9. Kurai, T., et al. 2007. AAV1 mediated co-expression of formylglycine-generating enzyme and arylsulfatase a efficiently corrects sulfatide storage in a mouse model of metachromatic leukodystrophy. *Mol. Ther.* 15: 38-43.

CHROMOSOMAL LOCATION

Genetic locus: ARSA (human) mapping to 22q13.33; Arsa (mouse) mapping to 15 E3.

SOURCE

ASA (C-12) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of ASA of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-79845 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

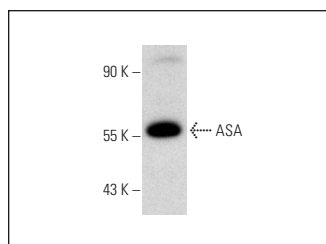
ASA (C-12) is recommended for detection of ASA of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for ASA siRNA (h): sc-72542, ASA siRNA (m): sc-72543, ASA shRNA Plasmid (h): sc-72542-SH, ASA shRNA Plasmid (m): sc-72543-SH, ASA shRNA (h) Lentiviral Particles: sc-72542-V and ASA shRNA (m) Lentiviral Particles: sc-72543-V.

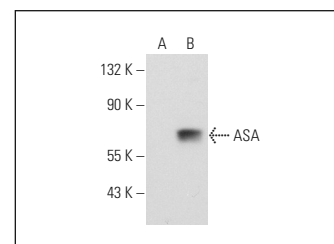
Molecular Weight of ASA: 62 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210, HeLa whole cell lysate: sc-2200 or ASA (h5): 293T Lysate: sc-158283.

DATA



ASA (C-12): sc-79845. Western blot analysis of ASA expression in NIH/3T3 whole cell lysate.



ASA (C-12): sc-79845. Western blot analysis of ASA expression in non-transfected: sc-110760 (A) and human ASA transfected: sc-158283 (B) 293T whole cell lysates.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.