SANTA CRUZ BIOTECHNOLOGY, INC.

IDS (B-5): sc-365047

BACKGROUND

IDS (iduronate 2-sulfatase), also known as SIDS, is a 550 amino acid protein that localizes to the lysosome and belongs to the sulfatase family. Expressed in lung, liver, kidney and placenta, IDS uses calcium as a cofactor to catalyze the hydrolysis of select sulfate groups on dermatan sulfate, heparan sulfate and heparin and, via this catalytic activity, is essential for the lysosomal degradation of both dermatan and heparan sulfate. Defects in the gene encoding IDS are the cause of mucopolysaccharidosis type 2 (MPS2), more commonly known as Hunter syndrome, which is characterized by skeletal deformities, hepatosplenomegaly and progressive cardiopulmonary deterioration, as well as neurological damage and, in some cases, death. IDS exists as two alternatively spliced isoforms, designated long and short.

REFERENCES

1. Wilson, P.J., et al. 1993. Sequence of the human iduronate 2-sulfatase (IDS) gene. Genomics 17: 773-775.
2. Malmgren, H., et al. 1995. Identification of an alternative transcript from the human iduronate-2-sulfatase (IDS) gene. Genomics 29: 291-293.
3. Li, P., et al. 1999. Molecular basis of iduronate-2-sulphatase gene mutations in patients with mucopolysaccharidosis type II (Hunter syndrome). J. Med. Genet. 36: 21-27.
4. Bonuccelli, G., et al. 2001. The effect of four mutations on the expression of iduronate-2-sulfatase in mucopolysaccharidosis type II. Biochim. Biophys. Acta 1537: 233-238.

CHROMOSOMAL LOCATION

Genetic locus: IDS (human) mapping to Xq28; Ids (mouse) mapping to X A7.1.

SOURCE

IDS (B-5) is a mouse monoclonal antibody raised against amino acids 92-334 mapping within an internal region of IDS of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

IDS (B-5) is available conjugated to agarose (sc-365047 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-365047 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365047 PE), fluorescein (sc-365047 FITC), Alexa Fluor® 488 (sc-365047 AF488), Alexa Fluor® 546 (sc-365047 AF546), Alexa Fluor® 594 (sc-365047 AF594) or Alexa Fluor® 647 (sc-365047 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-365047 AF680) or Alexa Fluor® 790 (sc-365047 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

STORAGE

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

APPLICATIONS

IDS (B-5) is recommended for detection of IDS of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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), immunohistochemistry (including paraffin-embedded sections) (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 IDS siRNA (h): sc-90917, IDS siRNA (m): sc-146143, IDS shRNA Plasmid (h): sc-90917-SH, IDS shRNA Plasmid (m): sc-146143-SH, IDS shRNA (h) Lentiviral Particles: sc-90917-V and IDS shRNA (m) Lentiviral Particles: sc-146143-V.

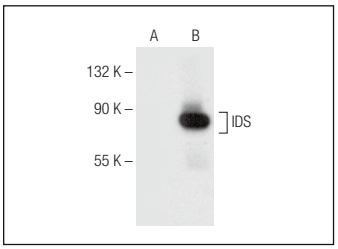
Molecular Weight of IDS: 62 kDa.

Positive Controls: IDS (m): 293 Lysate: sc-178771 or WI-38 whole cell lysate: sc-364260.

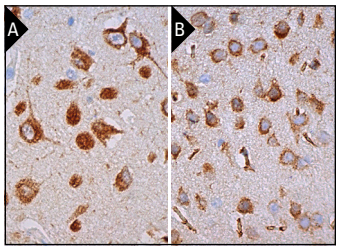
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



IDS (B-5): sc-365047. Western blot analysis of IDS expression in non-transfected: sc-110760 (**A**) and mouse IDS transfected: sc-178771 (**B**) 293 whole cell lysates.



IDS (B-5): sc-365047. Immunoperoxidase staining of formalin fixed, paraffin-embedded human cerebral cortex tissue (**A**) and mouse brain tissue (**B**) showing cytoplasmic staining of neuronal cells, glial cells and endothelial cells.

SELECT PRODUCT CITATIONS

1. Kim, C., et al. 2017. Comparative study of idursulfase β and idursulfase *in vitro* and *in vivo*. J. Hum. Genet. 62: 167-174.

RESEARCH USE

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