Sorbitol Dehydrogenase (E-8): sc-377200

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BIOTECHNOLOGY

The Power to Question

BACKGROUND

Sorbitol Dehydrogenase, also known as L-iditol 2-dehydrogenase, SORD or SORD1, is a 357 amino acid member of the zinc-containing alcohol dehydrogenase family. Widely expressed with highest expression in kidney and in the lens of the eye, Sorbitol Dehydrogenase enzymatically catalyzes the zinc-dependent interconversion of polyols, such as such as sorbitol and xylitol, to their respective ketoses. These reactions require NAD^+ as an oxidizing agent and, together with Aldose Reductase, they comprise the sorbitol pathway that is involved in sugar production. Sorbitol Dehydrogenase deficiency leads to defects in this pathway and a subsequent accumulation of sorbitol within the cell; a condition that may be associated with diabetic complications such as cataracts and microvascular problems.

CHROMOSOMAL LOCATION

Genetic locus: SORD (human) mapping to 15q21.1; Sord (mouse) mapping to 2 E5.

SOURCE

Sorbitol Dehydrogenase (E-8) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 307-343 near the C-terminus of Sorbitol Dehydrogenase of human origin.

PRODUCT

Each vial contains 200 µg IgG_3 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-377200 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

Sorbitol Dehydrogenase (E-8) is recommended for detection of Sorbitol Dehydrogenase 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Sorbitol Dehydrogenase (E-8) is also recommended for detection of Sorbitol Dehydrogenase in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for Sorbitol Dehydrogenase siRNA (h): sc-76540, Sorbitol Dehydrogenase siRNA (m): sc-76541, Sorbitol Dehydrogenase shRNA Plasmid (h): sc-76540-SH, Sorbitol Dehydrogenase shRNA Plasmid (m): sc-76541-SH, Sorbitol Dehydrogenase shRNA (h) Lentiviral Particles: sc-76540-V and Sorbitol Dehydrogenase shRNA (m) Lentiviral Particles: sc-76541-V.

Molecular Weight of Sorbitol Dehydrogenase: 38 kDa.

Positive Controls: Sorbitol Dehydrogenase (m2): 293T Lysate: sc-127569, rat liver extract: sc-2395 or mouse kidney extract: sc-2255.

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.

DATA
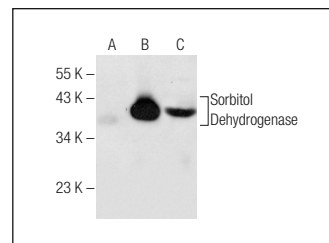
Sorbitol Dehydrogenase (E-8): sc-377200. Western blot analysis of Sorbitol Dehydrogenase expression in non-transfected: sc-117752 (**A**) and mouse Sorbitol Dehydrogenase transfected: sc-127569 (**B**) 293T whole cell lysates and HeLa nuclear extract (**C**).
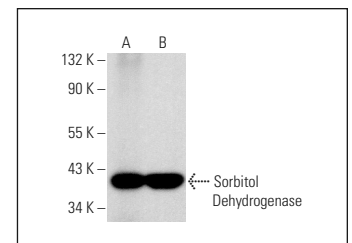
Sorbitol Dehydrogenase (E-8): sc-377200. Western blot analysis of Sorbitol Dehydrogenase expression in mouse kidney (**A**) and rat liver (**B**) tissue extracts. Detection reagent used: m-IgGκ BP-HRP: sc-516102.

SELECT PRODUCT CITATIONS

1. Rickard, J.P., et al. 2015. The identification of proteomic markers of sperm freezing resilience in ram seminal plasma. J. Proteomics 126: 303-311.

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 for detailed protocols and support products.