



SZABO SCANDIC

Part of Europa Biosite

Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

Weitere Information auf den folgenden Seiten!
See the following pages for more information!



Lieferung & Zahlungsart

siehe unsere [Liefer- und Versandbedingungen](#)

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

mail@szabo-scandic.com

www.szabo-scandic.com

[linkedin.com/company/szaboscandic](https://www.linkedin.com/company/szaboscandic) 

Sorbitol Dehydrogenase (m2): 293T Lysate: sc-127569

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.

REFERENCES

1. Iwata, T., Popescu, N.C., Zimonjic, D.B., Karlsson, C., Höög, J.O., Vaca, G., Rodríguez, I.R. and Carper, D. 1995. Structural organization of the human sorbitol dehydrogenase gene (SORD). *Genomics* 26: 55-62.
2. Carr, I.M., Whitehouse, A., Coletta, P.L. and Markham, A.F. 1998. Structural and evolutionary characterization of the human sorbitol dehydrogenase gene duplication. *Mamm. Genome* 9: 1042-1048.
3. Pauly, T.A., Ekstrom, J.L., Beebe, D.A., Chrnyk, B., Cunningham, D., Griffor, M., Kamath, A., Lee, S.E., Madura, R., Mcguire, D., Subashi, T., Wasilko, D., Watts, P., et al. 2003. X-ray crystallographic and kinetic studies of human sorbitol dehydrogenase. *Structure* 11: 1071-1085.
4. Ii, S., Ohta, M., Kudo, E., Yamaoka, T., Tachikawa, T., Moritani, M., Itakura, M. and Yoshimoto, K. 2004. Redox state-dependent and sorbitol accumulation-independent diabetic albuminuria in mice with transgene-derived human aldose reductase and sorbitol dehydrogenase deficiency. *Diabetologia* 47: 541-548.
5. El-Kabbani, O., Darmanin, C. and Chung, R.P. 2004. Sorbitol dehydrogenase: structure, function and ligand design. *Curr. Med. Chem.* 11: 465-476.
6. Schmidt, R.E., Dorsey, D.A., Beaudet, L.N., Parvin, C.A., Yarasheski, K.E., Smith, S.R., Williamson, J.R., et al. 2005. A potent sorbitol dehydrogenase inhibitor exacerbates sympathetic autonomic neuropathy in rats with streptozotocin-induced diabetes. *Exp. Neurol.* 192: 407-419.
7. Darmanin, C., Iwata, T., Carper, D.A. and El-Kabbani, O. 2006. Discovery of potential sorbitol dehydrogenase inhibitors from virtual screening. *Med. Chem.* 2: 239-242.
8. Hellgren, M., Kaiser, C., de Haij, S., Norberg, A. and Höög, J.O. 2007. A hydrogen-bonding network in mammalian sorbitol dehydrogenase stabilizes the tetrameric state and is essential for the catalytic power. *Cell. Mol. Life Sci.* 64: 3129-3138.
9. Szaflik, J.P., Majsterek, I., Kowalski, M., Rusin, P., Sobczuk, A., Borucka, A.I., Szaflik, J. and Blasiak, J. 2008. Association between sorbitol dehydrogenase gene polymorphisms and type 2 diabetic retinopathy. *Exp. Eye Res.* 86: 647-652.

CHROMOSOMAL LOCATION

Genetic locus: Sord (mouse) mapping to 2 E5.

PRODUCT

Sorbitol Dehydrogenase (m2): 293T Lysate represents a lysate of mouse Sorbitol Dehydrogenase transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

Sorbitol Dehydrogenase (m2): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive Sorbitol Dehydrogenase antibodies. Recommended use: 10-20 µl per lane.

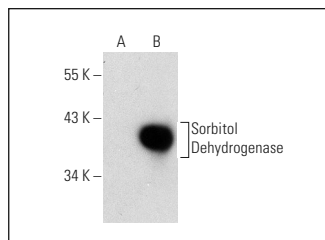
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

Sorbitol Dehydrogenase (E-11): sc-365760 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse Sorbitol Dehydrogenase expression in Sorbitol Dehydrogenase transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

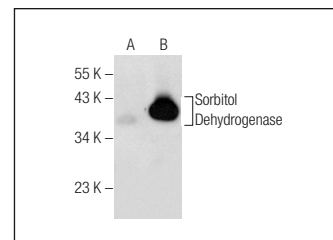
RECOMMENDED SUPPORT REAGENTS

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.

DATA



Sorbitol Dehydrogenase (E-11): sc-365760. 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.



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.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. 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.