

sorcín (39-M): sc-100859



The Power to Question

BACKGROUND

Sorcín is a highly conserved protein, with 95% homology between hamster and human sorcín sequences. Sorcín has four putative Ca-binding domains, two of which exhibit strong homology to calmodulin "EF hand" motifs. Calcium binding directly to sorcín has been demonstrated by *in vitro* assays. Sorcín is closely related to members of calpain and sarcoplasmic Ca²⁺-binding protein subfamilies. Sorcín undergoes calcium-dependent translocation from the cytosol to cellular membranes. Sorcín binds to and modulates ryanodine receptors and is widely distributed including heart and brain tissues. At the subcellular level, sorcín localizes to T-tubule junctions of cardiac sarcoplasmic reticulum.

CHROMOSOMAL LOCATION

Genetic locus: SRI (human) mapping to 7q21.12; Sri (mouse) mapping to 5 A1.

SOURCE

sorcín (39-M) is a mouse monoclonal antibody raised against a full-length recombinant protein mapping within amino acids 1-198 of sorcín of human origin.

PRODUCT

Each vial contains 100 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

sorcín (39-M) is recommended for detection of sorcín 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)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for sorcín siRNA (h): sc-41016, sorcín siRNA (m): sc-41017, sorcín shRNA Plasmid (h): sc-41016-SH, sorcín shRNA Plasmid (m): sc-41017-SH, sorcín shRNA (h) Lentiviral Particles: sc-41016-V and sorcín shRNA (m) Lentiviral Particles: sc-41017-V.

Molecular Weight of sorcín: 22 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

RECOMMENDED SUPPORT REAGENTS

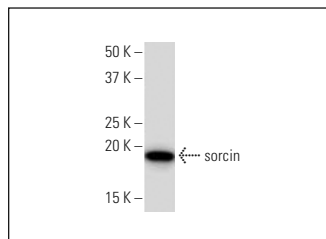
To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

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.

DATA

sorcín (39-M): sc-100859. Western blot analysis of sorcín expression in HeLa whole cell lysate.

SELECT PRODUCT CITATIONS

- Landriscina, M., et al. 2010. Mitochondrial chaperone Trap1 and the calcium binding protein sorcín interact and protect cells against apoptosis induced by antiproliferative agents. *Cancer Res.* 70: 6577-6586.
- Amoroso, M.R., et al. 2011. TRAP1 and the proteasome regulatory particle TBP7/Rpt3 interact in the endoplasmic reticulum and control cellular ubiquitination of specific mitochondrial proteins. *Cell Death Differ.* 19: 592-604.
- Maxwell, S.A., et al. 2011. Akt, 14-3-3ζ, and vimentin mediate a drug-resistant invasive phenotype in diffuse large B-cell lymphoma. *Leuk. Lymphoma* 52: 849-864.
- Li, X., et al. 2013. Engagement of soluble resistance-related calcium binding protein (sorcín) with foot-and-mouth disease virus (FMDV) VP1 inhibits type I interferon response in cells. *Vet. Microbiol.* 166: 35-46.
- Manohar, M., et al. 2014. Alteration in endometrial proteins during early- and mid-secretory phases of the cycle in women with unexplained infertility. *PLoS ONE* 9: e111687.
- Gong, Z., et al. 2014. Overexpression of sorcín in multidrug-resistant human breast cancer. *Oncol. Lett.* 8: 2393-2398.
- Li, X., et al. 2017. Negative regulation of hepatic inflammation by the soluble resistance-related calcium-binding protein via signal transducer and activator of transcription 3. *Front. Immunol.* 8: 709.
- Gupta, K., et al. 2018. Sorcín is involved during embryo implantation via activating VEGF/PI3K/Akt pathway in mice. *J. Mol. Endocrinol.* 60: 119-132.
- Yang, S., et al. 2022. Triphenylphosphonium conjugation to a TRAP1 inhibitor, 2-amino-6-chloro-7,9-dihydro-8H-purin-8-one increases antiproliferative activity. *Bioorg. Chem.* 126: 105856.
- Tito, C., et al. 2023. Sorcín promotes migration in cancer and regulates the EGF-dependent EGFR signaling pathways. *Cell. Mol. Life Sci.* 80: 202.

PROTOCOLS

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