

sorcin (39-M): sc-100859

BACKGROUND

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

REFERENCES

1. Van der Blik, A.M., et al. 1986. A 22-kd protein (sorcin/V19) encoded by an amplified gene in multidrug-resistant cells, is homologous to the calcium-binding light chain of calpain. *EMBO J.* 5: 3201-3208.
2. Meyers, M.B., et al. 1987. Sorcin (V19), a soluble acidic calcium-binding protein overproduced in multidrug-resistant cells. Identification of the protein by anti-sorcin antibody. *Biochem. Pharmacol.* 36: 2373-2380.

CHROMOSOMAL LOCATION

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

SOURCE

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

STORAGE

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

APPLICATIONS

sorcin (39-M) is recommended for detection of sorcin 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 sorcin siRNA (h): sc-41016, sorcin siRNA (m): sc-41017, sorcin shRNA Plasmid (h): sc-41016-SH, sorcin shRNA Plasmid (m): sc-41017-SH, sorcin shRNA (h) Lentiviral Particles: sc-41016-V and sorcin shRNA (m) Lentiviral Particles: sc-41017-V.

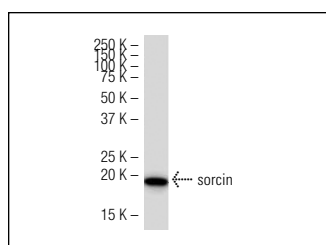
Molecular Weight of sorcin: 22 kDa.

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).

DATA



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

SELECT PRODUCT CITATIONS

1. Landriscina, M., et al. 2010. Mitochondrial chaperone Trap1 and the calcium binding protein sorcin interact and protect cells against apoptosis induced by antitublastic agents. *Cancer Res.* 70: 6577-6586.
2. 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.
3. 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.
4. Li, X., et al. 2013. Engagement of soluble resistance-related calcium binding protein (sorcin) with foot-and-mouth disease virus (FMDV) VP1 inhibits type I interferon response in cells. *Vet. Microbiol.* 166: 35-46.
5. 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.
6. Gong, Z., et al. 2014. Overexpression of sorcin in multidrug-resistant human breast cancer. *Oncol. Lett.* 8: 2393-2398.
7. 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.
8. Gupta, K., et al. 2018. Sorcin is involved during embryo implantation via activating VEGF/PI3K/Akt pathway in mice. *J. Mol. Endocrinol.* 60: 119-132.

RESEARCH USE

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