

SMARCD2 (F-34): sc-101162

BACKGROUND

SMARCD2 (SWI/SNF related, matrix associated, Actin dependent regulator of chromatin, subfamily D, member 2), also known as Rsc6p, PRO2451, BAF60B (BRG1-associated factor 60B) or CRACD2, is a member of the SMARCD family and contains one SWIB domain. Expressed in liver, muscle, pancreas, lung and placenta, SMARCD2 localizes to the nucleus and is a component of the ATP-dependent chromatin remodeling complex SWI/SNF and is believed to play a role in nucleosome remodeling. The SWI/SNF complex is involved in the activation of transcription via the remodeling of nucleosome structure in an ATP-dependent manner. SMARCD2 is a homolog of the *Saccharomyces cerevisiae* protein Swp73, a component of the yeast Swi/Snf complex that is required for transcriptional activation. Due to alternative splicing events, two isoforms exist for SMARCD2.

REFERENCES

1. Wang, W., et al. 1996. Diversity and specialization of mammalian SWI/SNF complexes. *Genes Dev.* 10: 2117-2130.
2. Nomoto, K., et al. 1997. Gene structure of rat BAF60b, a component of mammalian SWI/SNF complexes, and its physical linkage to the growth hormone gene and transcription factor SUG/proteasome p45 gene. *Gene* 202: 157-165.

CHROMOSOMAL LOCATION

Genetic locus: SMARCD2 (human) mapping to 17q23.3; Smarcd2 (mouse) mapping to 11 E1.

SOURCE

SMARCD2 (F-34) is a mouse monoclonal antibody raised against a C-terminal region of SMARCD2 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

SMARCD2 (F-34) is recommended for detection of SMARCD2 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)], 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 SMARCD2 siRNA (h): sc-93762, SMARCD2 siRNA (m): sc-153618, SMARCD2 shRNA Plasmid (h): sc-93762-SH, SMARCD2 shRNA Plasmid (m): sc-153618-SH, SMARCD2 shRNA (h) Lentiviral Particles: sc-93762-V and SMARCD2 shRNA (m) Lentiviral Particles: sc-153618-V.

Molecular Weight of SMARCD2: 60 kDa.

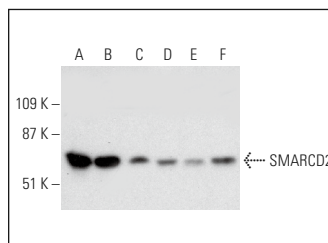
Positive Controls: NIH/3T3 whole cell lysate: sc-2210, THP-1 cell lysate: sc-2238 or Jurkat whole cell lysate: sc-2204.

RECOMMENDED SUPPORT REAGENTS

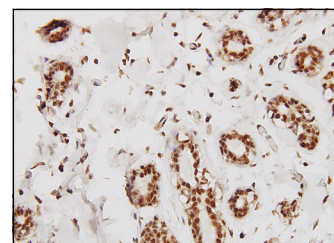
To ensure optimal results, the following support reagents are recommended:

- 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



SMARCD2 (F-34): sc-101162. Western blot analysis of SMARCD2 expression in Jurkat (A), THP-1 (B), COLO 205 (C), RAW 264.7 (D), NIH/3T3 (E) and PC-12 (F) whole cell lysates.



SMARCD2 (F-34): sc-101162. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human breast tissue showing nuclear localization.

SELECT PRODUCT CITATIONS

1. Pan, J., et al. 2018. Interrogation of mammalian protein complex structure, function, and membership using genome-scale fitness screens. *Cell Syst.* 6: 555-568.e7.
2. Wang, Z., et al. 2020. Dual ARID1A/ARID1B loss leads to rapid carcinogenesis and disruptive redistribution of BAF complexes. *Nat. Cancer* 1: 909-922.
3. Hornbachner, R., et al. 2021. MSX2 safeguards syncytiotrophoblast fate of human trophoblast stem cells. *Proc. Natl. Acad. Sci. USA* 118: e2105130118.
4. Kang, J.S., et al. 2023. Baf155 regulates skeletal muscle metabolism via HIF-1α signaling. *PLoS Biol.* 21: e3002192.
5. Duplaquet, L., et al. 2024. Mammalian SWI/SNF complex activity regulates POU2F3 and constitutes a targetable dependency in small cell lung cancer. *Cancer Cell* 42: 1352-1369.e13.

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.