

SH2D4A (F-5): sc-514170

BACKGROUND

SH2D4A (SH2 domain containing protein 4A), also known as SH2A, is a ubiquitously expressed 454 amino acid docking protein that belongs to the SH2 signaling protein family. Members of this family typically participate in intracellular signaling. Localizing to the cytoplasm, SH2D4A contains one Src homology 2 (SH2) domain. SH2 domains bind to tyrosine-phosphorylated regions of target proteins, frequently linking activated growth factors to putative signal transduction proteins. This suggests that SH2D4A, via its SH2 domain, may play an important function in cellular signal transduction. More specifically, SH2D4A is believed to function as an inhibiting factor in PKC signal transduction. In addition, SH2D4A exhibits abnormal expression in various cancers, implying that it may be involved in tumorigenesis.

REFERENCES

1. Dai, S., Zhao, Y. and Ding, Q. 2002. A novel member of SH(2) signaling protein family: cloning and characterization of SH(2)A gene. *Zhonghua Yi Xue Yi Chuan Xue Za Zhi* 19: 458-462.
2. Ding, Q., Zhao, Y.Y., Sun, Z.J. and Yu, D.H. 2003. Effect of SH2A gene in cell signal transduction and its subcellular localization. *Zhonghua Yi Xue Yi Chuan Xue Za Zhi* 20: 499-503.
3. Patrakka, J., Xiao, Z., Nukui, M., Takemoto, M., He, L., Oddsson, A., Perisic, L., Kaukinen, A., Szgyarto, C.A., Uhlén, M., Jalanko, H., Betsholtz, C. and Tryggvason, K. 2007. Expression and subcellular distribution of novel glomerulus-associated proteins dendrin, ehd3, sh2d4a, plekh2, and 2310066E14Rik. *J. Am. Soc. Nephrol.* 18: 689-697.
4. Jiang, X., Roth, L., Han, S. and Li, X. 2008. SH2 domain-based tyrosine phosphorylation array. *Methods Mol. Biol.* 441: 153-161.

CHROMOSOMAL LOCATION

Genetic locus: SH2D4A (human) mapping to 8p21.3.

SOURCE

SH2D4A (F-5) is a mouse monoclonal antibody raised against amino acids 113-165 mapping within an internal region of SH2D4A of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

SH2D4A (F-5) is available conjugated to agarose (sc-514170 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-514170 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514170 PE), fluorescein (sc-514170 FITC), Alexa Fluor® 488 (sc-514170 AF488), Alexa Fluor® 546 (sc-514170 AF546), Alexa Fluor® 594 (sc-514170 AF594) or Alexa Fluor® 647 (sc-514170 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-514170 AF680) or Alexa Fluor® 790 (sc-514170 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

STORAGE

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

APPLICATIONS

SH2D4A (F-5) is recommended for detection of SH2D4A of 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).

Suitable for use as control antibody for SH2D4A siRNA (h): sc-77685, SH2D4A shRNA Plasmid (h): sc-77685-SH and SH2D4A shRNA (h) Lentiviral Particles: sc-77685-V.

Molecular Weight of SH2D4A: 53 kDa.

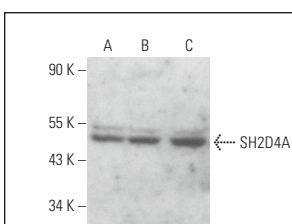
Positive Controls: HeLa whole cell lysate: sc-2200, NTERA-2 cl.D1 whole cell lysate: sc-364181 or RT-4 whole cell lysate: sc-364257.

RECOMMENDED SUPPORT REAGENTS

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

- 1) Western Blotting: use m-IgGκ BPHRP: sc-516102 or m-IgGκ BPHRP (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 BPHRP-FITC: sc-516140 or m-IgGκ BPHRP: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



SH2D4A (F-5): sc-514170. Western blot analysis of SH2D4A expression in HeLa (A), A-431 (B) and NTERA-2 cl.D1 (C) whole cell lysates.



SH2D4A (F-5): sc-514170. Western blot analysis of SH2D4A expression in HeLa (A) and RT-4 (B) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Yuki, R., Ikeda, Y., Yasutake, R., Saito, Y. and Nakayama, Y. 2023. SH2D4A promotes centrosome maturation to support spindle microtubule formation and mitotic progression. *Sci. Rep.* 13: 2067.

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.

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