SANTA CRUZ BIOTECHNOLOGY, INC.

KRIT1 (8-RY2): sc-134376

BACKGROUND

The Krev interaction-trapped 1 (KRIT1) gene encodes a 529 amino acid microtubule-associated protein. Specifically, during interphase, KRIT1 localizes along the length of microtubules, whereas during metaphase it localizes on spindle pole bodies and on the mitotic spindle. During later phases of mitosis, KRIT1 localizes to the midbody where plus ends from dividing cells overlap. KRIT1 interacts with both Krev1 and integrin cytoplasmic domain-associated protein-1 α (ICAP-1 α), suggesting that KRIT1 may help determine endothelial cell shape and function in response to cell-cell and cell-matrix interactions by guiding cytoskeletal structure. In addition, KRIT1 mutations are implicated in individuals with cerebral cavernous malformations (CCM). CCMs are capillaro-venous abnormalities located mostly within the central nervous system, and occasionally within the skin and/or retina. CCMs may occur either sporadically or as an autosomal dominant condition and can result in cerebral hemorrhages, strokes and seizures.

REFERENCES

1. Serebriiskii, I., Estojak, J., Sonoda, G., Testa, J.R. and Golemis, E.A. 1997. Association of Krev-1/Rap 1A with KRIT1, a novel ankyrin repeat-containing protein encoded by a gene mapping to 7q21-22. Oncogene 15: 1043-1049.
2. Craig, H.D., Gunel, M., Cepeda, O., Johnson, E.W., Ptacek, L., Steinberg, G.K., Ogilvy, C.S., Berg, M.J., Crawford, S.C., Scott, R.M., Steichen-Gersdorf, E., Sabroe, R., Kennedy, C.T., Mettler, G., et al. 1998. Multilocus linkage identifies two new loci for a mendelian form of stroke, cerebral cavernous malformation, at 7p15-13 and 3q25.2-27. Hum. Mol. Genet. 7: 1851-1858.
3. Gunel, M., Laurans, M.S., Shin, D., DiLuna, M.L., Voorhees, J., Choate, K., Nelson-Williams, C. and Lifton, R.P. 2002. KRIT1, a gene mutated in cerebral cavernous malformation, encodes a microtubule-associated protein. Proc. Natl. Acad. Sci. USA 99: 10677-10682.
4. Denier, C., Gasc, J.M., Chapon, F., Domenga, V., Lescoat, C., Joutel, A. and Tournier-Lasserve, E. 2002. KRIT1/cerebral cavernous malformation 1 mRNA is preferentially expressed in neurons and epithelial cells in embryo and adult. Mech. Dev. 117: 363-367.
5. Kehrer-Sawatzki, H., Wilda, M., Braun, V.M., Richter, H.P. and Hameister, H. 2002. Mutation and expression analysis of the KRIT1 gene associated with cerebral cavernous malformations (CCM1). Acta Neuropathol. 104: 231-240.

CHROMOSOMAL LOCATION

Genetic locus: KRIT1 (human) mapping to 7q21.2.

SOURCE

KRIT1 (8-RY2) is a mouse monoclonal antibody raised against recombinant KRIT1 protein of human origin.

PRODUCT

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

RESEARCH USE

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

APPLICATIONS

KRIT1 (8-RY2) is recommended for detection of KRIT1 of 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 KRIT1 siRNA (h): sc-43884, KRIT1 shRNA Plasmid (h): sc-43884-SH and KRIT1 shRNA (h) Lentiviral Particles: sc-43884-V.

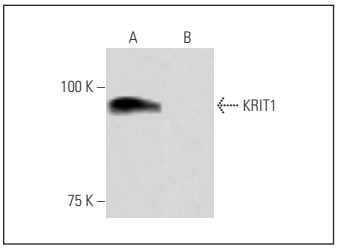
Molecular Weight of KRIT1: 83 kDa.

Positive Controls: IMR-32 cell lysate: sc-2409 or human KRIT1 transfected 293T whole cell lysate.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGλ BP-HRP: sc-516132 or m-IgGλ BP-HRP (Cruz Marker): sc-516132-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



KRIT1 (8-RY2): sc-134376. Western blot analysis of KRIT1 expression in human KRIT1 transfected (**A**) and non-transfected (**B**) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Zheng, G., Li, N., Jia, X., Peng, C., Luo, L., Deng, Y., Yin, J., Song, Y., Liu, H., Lu, M., Zhang, Z., Gu, Y. and He, Z. 2016. MYCN-mediated miR-21 overexpression enhances chemo-resistance via targeting CADM1 in tongue cancer. J. Mol. Med. 94: 1129-1141.

STORAGE

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

PROTOCOLS

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