

KRIT1 (K-16): sc-23997

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 capillary-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., et al. 1997. Association of Krev1/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., 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., et al. 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., et al. 2002. KRIT1/cerebral cavernous malformation 1 mRNA is preferentially expressed in neurons and epithelial cells in embryo and adult. *Mech. Dev.* 117: 363-367.

CHROMOSOMAL LOCATION

Genetic locus: KRIT1 (human) mapping to 7q21.2; Krit1 (mouse) mapping to 5 A1.

SOURCE

KRIT1 (K-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of KRIT1 of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-23997 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

KRIT1 (K-16) is recommended for detection of KRIT1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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).

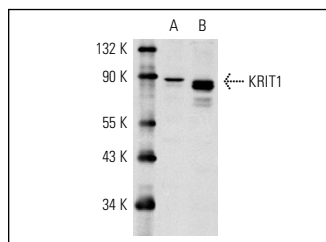
KRIT1 (K-16) is also recommended for detection of KRIT1 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for KRIT1 siRNA (h): sc-43884, KRIT1 siRNA (m): sc-146571, KRIT1 shRNA Plasmid (h): sc-43884-SH, KRIT1 shRNA Plasmid (m): sc-146571-SH, KRIT1 shRNA (h) Lentiviral Particles: sc-43884-V and KRIT1 shRNA (m) Lentiviral Particles: sc-146571-V.

Molecular Weight of KRIT1: 83 kDa.

Positive Controls: IMR-32 cell lysate: sc-2409 or mouse brain extract: sc-2253.

DATA



KRIT1 (K-16): sc-23997. Western blot analysis of KRIT1 expression in IMR-32 whole cell lysate (A) and mouse brain tissue extract (B).

SELECT PRODUCT CITATIONS

1. Gore, A.V., et al. 2008. Combinatorial interaction between CCM pathway genes precipitates hemorrhagic stroke. *Dis. Model Mech.* 1: 275-281.
2. Lampugnani, M.G., et al. 2010. CCM1 regulates vascular-lumen organization by inducing endothelial polarity. *J. Cell Sci.* 123: 1073-1080.

RESEARCH USE

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

PROTOCOLS

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

MONOS
Satisfaction
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Try **KRIT1 (E-8): sc-514371** or **KRIT1 (8-RY2): sc-134376**, our highly recommended monoclonal alternatives to KRIT1 (K-16).