

KRIT1 (E-8): sc-514371

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

- Serebriiskii, I., et al. 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.
- 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.
- 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.

CHROMOSOMAL LOCATION

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

SOURCE

KRIT1 (E-8) is a mouse monoclonal antibody raised against amino acids 475-736 mapping at the C-terminus of KRIT1 of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

KRIT1 (E-8) is available conjugated to agarose (sc-514371 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-514371 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514371 PE), fluorescein (sc-514371 FITC), Alexa Fluor[®] 488 (sc-514371 AF488), Alexa Fluor[®] 546 (sc-514371 AF546), Alexa Fluor[®] 594 (sc-514371 AF594) or Alexa Fluor[®] 647 (sc-514371 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-514371 AF680) or Alexa Fluor[®] 790 (sc-514371 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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RESEARCH USE

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

APPLICATIONS

KRIT1 (E-8) is recommended for detection of KRIT1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

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.

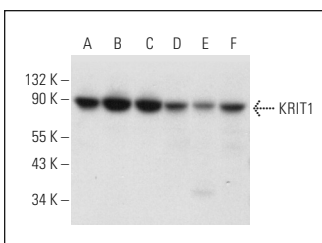
Molecular Weight of KRIT1: 83 kDa.

Positive Controls: SH-SY5Y cell lysate: sc-3812, Ramos cell lysate: sc-2216 or Raji whole cell lysate: sc-364236.

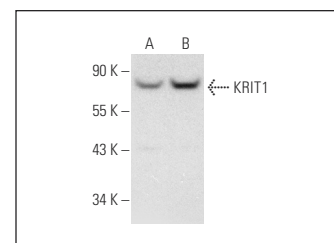
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850.

DATA



KRIT1 (E-8): sc-514371. Western blot analysis of KRIT1 expression in IMR-32 (A), Raji (B), Ramos (C), SW-13 (D), NCI-H226 (E) and SHP-77 (F) whole cell lysates.



KRIT1 (E-8): sc-514371. Western blot analysis of KRIT1 expression in Raji (A) and SH-SY5Y (B) whole cell lysates.

SELECT PRODUCT CITATIONS

- Abou-Fadel, J., et al. 2020. Emerging roles of CCM genes during tumorigenesis with potential application as novel biomarkers across major types of cancers. *Oncol. Rep.* 43: 1945-1963.
- Clause, V., et al. 2022. Thyclotides, tetrahydrofuran-modified peptide nucleic acids that efficiently penetrate cells and inhibit microRNA-21. *Nucleic Acids Res.* E-published.

STORAGE

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