SANTA CRUZ BIOTECHNOLOGY, INC.

RNF219 (A-4): sc-514812

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The Power to Question

BACKGROUND

The RING-type zinc finger motif is present in a number of viral and eukaryotic proteins and is made of a conserved cysteine-rich domain that is able to bind two zinc atoms. Proteins that contain this conserved domain are generally involved in the ubiquitination pathway of protein degradation. RNF219 (ring finger protein 219) is a 726 amino acid protein that contains one RING-type zinc finger through which it may play a role in transcriptional regulation and protein degradation events. In response to DNA damage, RNF219 is subject to phosphorylation, probably by ATM or ATR. The gene encoding RNF219 maps to human chromosome 13, which houses over 400 genes, such as BRCA2 and RB1, and comprises nearly 4% of the human genome. Trisomy 13, also known as Patau syndrome, is deadly and the few who survive past one year suffer from permanent neurologic defects, difficulty eating and vulnerability to serious respiratory infections.

REFERENCES

1. Freemont, P.S. 1993. The RING finger. A novel protein sequence motif related to the zinc finger. Ann. N.Y. Acad. Sci. 684: 174-192.
2. Borden, K.L. and Freemont, P.S. 1996. The RING finger domain: a recent example of a sequence-structure family. Curr. Opin. Struct. Biol. 6: 395-401.
3. Lorick, K.L., et al. 1999. RING fingers mediate ubiquitin-conjugating enzyme (E2)-dependent ubiquitination. Proc. Natl. Acad. Sci. USA 96: 11364-11369.
4. Bugge, M., et al. 2007. Non-disjunction of chromosome13. Hum. Mol. Genet. 16: 2004-2010.
5. Hsu, H.F. and Hou, J.W. 2007. Variable expressivity in Patau syndrome is not all related to trisomy 13 mosaicism. Am. J. Med. Genet. A 143A: 1739-1748.
6. Hall, H.E., et al. 2007. The origin of trisomy 13. Am. J. Med. Genet. A 143A: 2242-2248.

CHROMOSOMAL LOCATION

Genetic locus: RNF219 (human) mapping to 13q31.1; Rnf219 (mouse) mapping to 14 E2.3.

SOURCE

RNF219 (A-4) is a mouse monoclonal antibody raised against amino acids 1-160 mapping at the N-terminus of RNF219 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

RNF219 (A-4) is available conjugated to agarose (sc-514812 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-514812 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514812 PE), fluorescein (sc-514812 FITC), Alexa Fluor® 488 (sc-514812 AF488), Alexa Fluor® 546 (sc-514812 AF546), Alexa Fluor® 594 (sc-514812 AF594) or Alexa Fluor® 647 (sc-514812 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-514812 AF680) or Alexa Fluor® 790 (sc-514812 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

RNF219 (A-4) is recommended for detection of RNF219 of mouse, rat and 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 RNF219 siRNA (h): sc-105149, RNF219 siRNA (m): sc-153041, RNF219 shRNA Plasmid (h): sc-105149-SH, RNF219 shRNA Plasmid (m): sc-153041-SH, RNF219 shRNA (h) Lentiviral Particles: sc-105149-V and RNF219 shRNA (m) Lentiviral Particles: sc-153041-V.

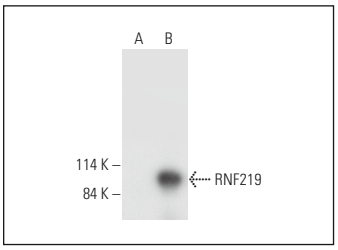
Molecular Weight of RNF219: 81 kDa.

Positive Controls: RNF219 (m): 293T Lysate: sc-123239.

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.

DATA



RNF219 (A-4): sc-514812. Western blot analysis of RNF219 expression in non-transfected: sc-117752 (**A**) and mouse RNF219 transfected: sc-123239 (**B**) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Hwang, J.S., et al. 2020. Ring finger protein 219 regulates inflammatory responses by stabilizing silent mating type information regulation 2 homolog 1 (SIRT1). Br. J. Pharmacol. 177: 4601-4614.

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.