

# RNF167 (E-9): sc-515405

## 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 protein-protein interactions and protein-DNA interactions. RNF167 (RING finger protein 167), also known as RING105, contains one RING-type zinc finger domain and one protease associated (PA) domain. RNF167 is a single-pass membrane protein localized to the endomembrane system of cytoplasmic membranes. Strongly expressed in kidney and liver, RNF167 may act as an E3 ubiquitin-protein ligase or as part of the E3 complex, which accepts ubiquitin from specific E2 enzymes and transfers it to substrates, such as ORCTL2. RNF167 may also be involved in growth regulation during G<sub>1</sub>/S transition.

## REFERENCES

1. Wan, D., et al. 2004. Large-scale cDNA transfection screening for genes related to cancer development and progression. *Proc. Natl. Acad. Sci. USA* 101: 15724-15729.
2. Kotoshiba, S., et al. 2005. Molecular dissection of the interaction between p27 and Kip1 ubiquitylation-promoting complex, the ubiquitin ligase that regulates proteolysis of p27 in G<sub>1</sub> phase. *J. Biol. Chem.* 280: 17694-17700.

## CHROMOSOMAL LOCATION

Genetic locus: RNF167 (human) mapping to 17p13.2; Rnf167 (mouse) mapping to 11 B3.

## SOURCE

RNF167 (E-9) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 309-328 near the C-terminus of RNF167 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>2b</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

RNF167 (E-9) is available conjugated to agarose (sc-515405 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-515405 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-515405 PE), fluorescein (sc-515405 FITC), Alexa Fluor® 488 (sc-515405 AF488), Alexa Fluor® 546 (sc-515405 AF546), Alexa Fluor® 594 (sc-515405 AF594) or Alexa Fluor® 647 (sc-515405 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-515405 AF680) or Alexa Fluor® 790 (sc-515405 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-515405 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

## STORAGE

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

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA

## APPLICATIONS

RNF167 (E-9) is recommended for detection of RNF167 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 RNF167 siRNA (h): sc-93642, RNF167 siRNA (m): sc-153023, RNF167 shRNA Plasmid (h): sc-93642-SH, RNF167 shRNA Plasmid (m): sc-153023-SH, RNF167 shRNA (h) Lentiviral Particles: sc-93642-V and RNF167 shRNA (m) Lentiviral Particles: sc-153023-V.

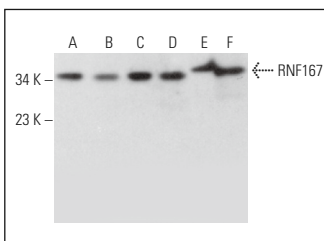
Molecular Weight of RNF167: 38 kDa.

Positive Controls: JAR cell lysate: sc-2276, COLO 205 whole cell lysate: sc-364177 or Caki-1 cell lysate: sc-2224.

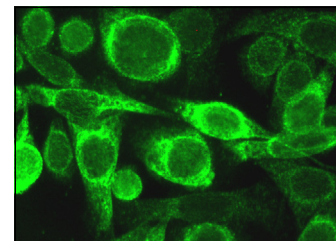
## RECOMMENDED SUPPORT REAGENTS

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



RNF167 (E-9): sc-515405. Western blot analysis of RNF167 expression in COLO 205 (A), Caki-1 (B), JAR (C), TT (D) and F9 (E) whole cell lysates and rat kidney tissue extract (F).



RNF167 (E-9): sc-515405. Immunofluorescence staining of formalin-fixed SW480 cells showing cytoplasmic localization.

## SELECT PRODUCT CITATIONS

1. Li, T., et al. 2021. RNF167 activates mTORC1 and promotes tumorigenesis by targeting CASTOR1 for ubiquitination and degradation. *Nat. Commun.* 12: 1055.
2. Wang, D., et al. 2022. E3 ligase RNF167 and deubiquitinase STAMBPL1 modulate mTOR and cancer progression. *Mol. Cell* 82: 770-784.e9.

## RESEARCH USE

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