

RNF181 (N-14): sc-169200

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. RNF181 (RING finger protein 181) is a 153 amino acid protein that contains one RING-type zinc finger and belongs to the RNF181 family. RNF181 is auto-ubiquitinated as part of the enzymatic reaction, and upon DNA damage, RNF181 is phosphorylated by ATM or ATR. RNF181 demonstrates highest levels of expression in liver and heart, moderate levels in placenta, lung, liver, kidney, pancreas, and lower levels in brain and skeletal muscle. The RNF181 gene is conserved in chimpanzee, canine, bovine, mouse, rat, zebrafish and fruit fly, and maps to human chromosome 2p11.2.

REFERENCES

1. Borden, K.L., et al. 1996. The RING finger domain: a recent example of a sequence-structure family. *Curr. Opin. Struct. Biol.* 6: 395-401.
2. Lorick, K.L., et al. 1999. RING fingers mediate ubiquitin-conjugating enzyme (E2)-dependent ubiquitination. *Proc. Natl. Acad. Sci. USA* 96: 11364-11369.
3. Zhang, Q.H., et al. 2000. Cloning and functional analysis of cDNAs with open reading frames for 300 previously undefined genes expressed in CD34⁺ hematopoietic stem/progenitor cells. *Genome Res.* 10: 1546-1560.
4. Strausberg, R.L., et al. 2002. Generation and initial analysis of more than 15,000 full-length human and mouse cDNA sequences. *Proc. Natl. Acad. Sci. USA* 99: 16899-16903.
5. Matsuoka, S., et al. 2007. ATM and ATR substrate analysis reveals extensive protein networks responsive to DNA damage. *Science* 316: 1160-1166.

CHROMOSOMAL LOCATION

Genetic locus: RNF181 (human) mapping to 2p11.2; Rnf181 (mouse) mapping to 6 C1.

SOURCE

RNF181 (N-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of RNF181 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-169200 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-169200 X, 200 µg/0.1 ml.

STORAGE

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

APPLICATIONS

RNF181 (N-14) is recommended for detection of RNF181 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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); non cross-reactive with other RNF family members.

RNF181 (N-14) is also recommended for detection of RNF181 in additional species, including bovine.

Suitable for use as control antibody for RNF181 siRNA (h): sc-94487, RNF181 siRNA (m): sc-153028, RNF181 shRNA Plasmid (h): sc-94487-SH, RNF181 shRNA Plasmid (m): sc-153028-SH, RNF181 shRNA (h) Lentiviral Particles: sc-94487-V and RNF181 shRNA (m) Lentiviral Particles: sc-153028-V.

RNF181 (N-14) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of RNF181: 18 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

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.