SANTA CRUZ BIOTECHNOLOGY, INC.

RNF168 (B-11): sc-101125

SANTA CRUZ BIOTECHNOLOGY

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. RNF168 (RING finger protein 168) is a 571 amino acid protein that contains one RING-type zinc finger. Via its RING-type zinc finger, RNF168 may play a role in transcriptional regulation and protein degradation events. The gene encoding RNF168 maps to human chromosome 3, which houses over 1,100 genes, including a chemokine receptor (CKR) gene cluster and a variety of human cancer-related gene loci.

REFERENCES

1. 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.
2. Lorick, K.L., et al. 1999. RING fingers mediate ubiquitin-conjugating enzyme (E2)-dependent ubiquitination. Proc. Natl. Acad. Sci. USA 96: 11364-11369.

CHROMOSOMAL LOCATION

Genetic locus: RNF168 (human) mapping to 3q29; Rnf168 (mouse) mapping to 16 B2.

SOURCE

RNF168 (B-11) is a mouse monoclonal antibody raised against recombinant RNF168 of human origin.

PRODUCT

Each vial contains 100 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

RNF168 (B-11) is recommended for detection of RNF168 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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 RNF168 siRNA (h): sc-78089, RNF168 siRNA (m): sc-153024, RNF168 shRNA Plasmid (h): sc-78089-SH, RNF168 shRNA Plasmid (m): sc-153024-SH, RNF168 shRNA (h) Lentiviral Particles: sc-78089-V and RNF168 shRNA (m) Lentiviral Particles: sc-153024-V.

Molecular Weight of RNF168: 65 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227 or HeLa whole cell lysate: sc-2200.

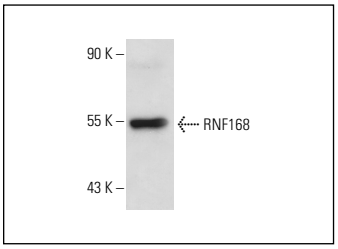
STORAGE

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

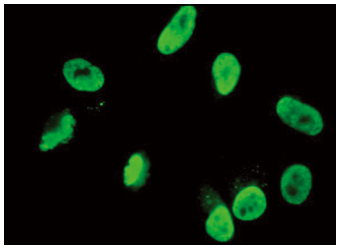
RESEARCH USE

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

DATA



RNF168 (B-11): sc-101125. Western blot analysis of RNF168 expression in HeLa whole cell lysate.



RNF168 (B-11): sc-101125. Immunofluorescence staining of paraformaldehyde-fixed Hep G2 cells showing nuclear localization.

SELECT PRODUCT CITATIONS

1. Tikoo, S., et al. 2013. Ubiquitin-dependent recruitment of the Bloom syndrome helicase upon replication stress is required to suppress homologous recombination. EMBO J. 32: 1778-1792.
2. Zhao, H., et al. 2014. Bcl10 regulates RNF8/RNF168-mediated ubiquitination in the DNA damage response. Cell Cycle 13: 1777-1787.
3. Rahjouei, A., et al. 2017. MAD2L2 promotes open chromatin in embryonic stem cells and derepresses the Dppa3 locus. Stem Cell Reports 8: 813-821.
4. Liu, Z., et al. 2018. RNF168 facilitates oestrogen receptor α transcription and drives breast cancer proliferation. J. Cell. Mol. Med. 22: 4161-4170.
5. Sharma, A., et al. 2018. USP14 regulates DNA damage repair by targeting RNF168-dependent ubiquitination. Autophagy 14: 1976-1990.
6. Yu, N., et al. 2019. RNF168 facilitates proliferation and invasion of esophageal carcinoma, possibly via stabilizing Stat1. J. Cell. Mol. Med. 23: 1553-1561.
7. Xu, R., et al. 2019. hCINAP regulates the DNA-damage response and mediates the resistance of acute myelocytic leukemia cells to therapy. Nat. Commun. 10: 3812.
8. Lee, K.Y. and Dutta, A. 2021. Chk1 promotes non-homologous end joining in G_1 through direct phosphorylation of ASF1A. Cell Rep. 34: 108680.
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11. Huang, M., et al. 2024. Targeting the HECTD3-p62 axis increases the radiosensitivity of triple negative breast cancer cells. Cell Death Discov. 10: 462.

PROTOCOLS

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