

RNF141 (V-20): sc-83029

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. RNF141 (ring finger protein 141), also known as ZFP26 or ZNF230, is a 230 amino acid protein that contains one RING-type zinc finger. Expressed as two isoforms (isoform 1 and isoform 2) due to alternative splicing events, RNF141 is thought to function as a transcription factor during spermatogenesis. While isoform 2 is expressed in brain, heart, pancreas, kidney and skeletal muscle, isoform 1 is expressed primarily in testis, suggesting that isoform 1 functions during spermatogenesis. In addition, RNF141 is not expressed in azoospermic (infertile) men, further implicating an important role for RNF141 in testis development and male fertility.

REFERENCES

- 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.
- Lorick, K.L., Jensen, J.P., Fang, S., Ong, A.M., Hatakeyama, S. and Weissman, A.M. 1999. RING fingers mediate ubiquitin-conjugating enzyme (E2)-dependent ubiquitination. *Proc. Natl. Acad. Sci. USA* 96: 11364-11369.
- Zhang, S., Qiu, W., Wu, H., Zhang, G., Huang, M., Xiao, C., Yang, J., Kamp, C., Huang, X., Huellen, K., Yue, Y., Pan, A., Lebo, R., Milunsky, A. and Vogt, P.H. 2001. The shorter zinc finger protein ZNF230 gene message is transcribed in fertile male testes and may be related to human spermatogenesis. *Biochem. J.* 359: 721-727.
- Qiu, W., Zhang, S., Xiao, C., Xu, W., Ma, Y., Liu, Y. and Wu, Q. 2003. Molecular cloning and characterization of a mouse spermatogenesis-related ring finger gene *Znf230*. *Biochem. Biophys. Res. Commun.* 306: 347-353.
- Xu, W.M., Zhang, S.Z., Qiu, W.M., He, G.P., Liu, Y.Q., Ma, Y.X. and Sun, Y. 2004. Construction of recombinant ZNF230/GFP fused plasmids and their expression and cellular localization. *Yi Chuan* 26: 451-454.
- Dong, J.T., Zhang, S.Z., Ma, Y.X., Yang, K.X., Huang, M.K., Sun, Y., He, G.P., Li, Y., Zhang, W. and Peng, Y. 2005. Screening for ZNF230 gene mutation and analysis of its correlation with azoospermia. *Zhonghua Yi Xue Yi Chuan Xue Za Zhi* 22: 258-260.
- Rossi, P., Lolicato, F., Grimaldi, P., Dolci, S., Di Sauro, A., Filipponi, D. and Geremia, R. 2008. Transcriptome analysis of differentiating spermatogonia stimulated with kit ligand. *Gene Expr. Patterns* 8: 58-70.

CHROMOSOMAL LOCATION

Genetic locus: RNF141 (human) mapping to 11p15.4; Rnf141 (mouse) mapping to 7 F1.

SOURCE

RNF141 (V-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of RNF141 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-83029 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

RNF141 (V-20) is recommended for detection of RNF141 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.

RNF141 (V-20) is also recommended for detection of RNF141 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for RNF141 siRNA (h): sc-76413, RNF141 siRNA (m): sc-76414, RNF141 shRNA Plasmid (h): sc-76413-SH, RNF141 shRNA Plasmid (m): sc-76414-SH, RNF141 shRNA (h) Lentiviral Particles: sc-76413-V and RNF141 shRNA (m) Lentiviral Particles: sc-76414-V.

RNF141 (V-20) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of RNF141: 26 kDa.

Positive Controls: A-431 whole cell lysate: sc-2201.

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.

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.

PROTOCOLS

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