

ZNRD1 (10B7): sc-135614

BACKGROUND

ZNRD1 (zinc ribbon domain containing 1), also known as TEX6, Rpa12 or hZR14, is a 126 amino acid protein that localizes to the nucleolus and contains one TFIIIS-type zinc finger. Existing as a component of the multi-protein Pol I (RNA polymerase I) complex, ZNRD1 functions as a DNA-dependent RNA polymerase that catalyzes the transcription of DNA into RNA and plays a role in the synthesis of ribosomal RNA (rRNA) precursors. The gene encoding ZNRD1 maps to human chromosome 6, which contains 170 million base pairs and comprises nearly 6% of the human genome. Deletion of a portion of the q arm of chromosome 6 is associated with early onset intestinal cancer, suggesting the presence of a cancer susceptibility locus. Additionally, porphyria cutanea tarda, Parkinson's disease, Stickler syndrome and a susceptibility to bipolar disorder are all associated with genes that map to chromosome 6.

REFERENCES

- Lepourcelet, M., Andrieux, N., Giffon, T., Pichon, L., Hampe, A., Galibert, F. and Mosser, J. 1996. Systematic sequencing of the human HLA-A/HLA-F region: establishment of a cosmid contig and identification of a new gene cluster within 37 kb of sequence. *Genomics* 37: 316-326.
- Fan, W., Wang, Z., Kyzysztof, F., Prange, C. and Lennon, G. 2000. A new zinc ribbon gene (ZNRD1) is cloned from the human MHC class I region. *Genomics* 63: 139-141.
- Coriton, O., Lepourcelet, M., Hampe, A., Galibert, F. and Mosser, J. 2000. Transcriptional analysis of the 69-kb sequence centromeric to HLA-J: a dense and complex structure of five genes. *Mamm. Genome* 11: 1127-1131.
- Online Mendelian Inheritance in Man, OMIM™. 2003. Johns Hopkins University, Baltimore, MD. MIM Number: 607525. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
- Hong, L., Wang, J., Zhao, Y., Han, Z., Zhou, X., Guo, W., Zhang, X., Jin, H., Wu, K., Ding, J. and Fan, D. 2007. DARPP-32 mediates multidrug resistance of gastric cancer through regulation of P-gp and ZNRD1. *Cancer Invest.* 25: 699-705.
- Guo, W., Zhao, Y.P., Jiang, Y.G., Wang, R.W., Hong, L. and Fan, D.M. 2008. ZNRD1 might mediate UV irradiation related DNA damage and repair in human esophageal cancer cells by regulation of ERCC1. *Dis. Esophagus* 21: 730-736.
- Catano, G., Kulkarni, H., He, W., Marconi, V.C., Agan, B.K., Landrum, M., Anderson, S., Delmar, J., Telles, V., Song, L., Castiblanco, J., Clark, R.A., Dolan, M.J. and Ahuja, S.K. 2008. HIV-1 disease-influencing effects associated with ZNRD1, HCP5 and HLA-C alleles are attributable mainly to either HLA-A*10 or HLA-B*57 alleles. *PLoS ONE* 3: e3636.
- Zhao, Y., Hong, L., Wang, R. and Fan, D. 2009. Expression and prognostic value of ZNRD1 in esophageal squamous cell carcinoma. *Dig. Dis. Sci.* 54: 586-592.

STORAGE

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

CHROMOSOMAL LOCATION

Genetic locus: ZNRD1 (human) mapping to 6p21.33.

SOURCE

ZNRD1 (10B7) is a mouse monoclonal antibody raised against recombinant ZNRD1 protein of human origin.

PRODUCT

Each vial contains 100 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

ZNRD1 (10B7) is recommended for detection of ZNRD1 of 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)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for ZNRD1 siRNA (h): sc-77010, ZNRD1 shRNA Plasmid (h): sc-77010-SH and ZNRD1 shRNA (h) Lentiviral Particles: sc-77010-V.

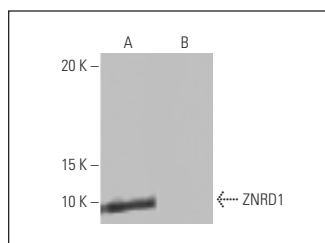
Molecular Weight of ZNRD1: 14 kDa.

Positive Controls: human ZNRD1 transfected 293T whole cell lysate.

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).

DATA



ZNRD1 (10B7): sc-135614. Western blot analysis of ZNRD1 expression in human ZNRD1 transfected (A) and non-transfected (B) 293T whole cell lysates.

RESEARCH USE

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

PROTOCOLS

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