

# RMND5A (D-13): sc-161200

## BACKGROUND

RMND5A (required for meiotic nuclear division 5 homolog A), also known as CTLH (C-terminal to the Lissencephaly type-1-like homology), RMD5 or p44CTLH, is a 391 amino acid protein containing one CTLH domain and one LisH domain. Existing as two alternatively spliced isoforms, RMND5A plays an essential role in the degradation of fructose-1,6-bisphosphatase (FR) in yeast and is well conserved in mammalian cells. RMND5A is encoded by a gene located on human chromosome 2, which houses over 1,400 genes and comprises nearly 8% of the human genome. Harlequin ichthyosis, a rare and morbid skin deformity, is associated with mutations in the ABCA12 gene, while the lipid metabolic disorder sitosterolemia is associated with defects in the ABCG5 and ABCG8 genes. Additionally, an extremely rare recessive genetic disorder, Alström syndrome, is caused by mutations in the ALMS1 gene, which maps to chromosome 2.

## REFERENCES

1. Ijdo, J.W., et al. 1991. Origin of human chromosome 2: an ancestral telomere-telomere fusion. *Proc. Natl. Acad. Sci. USA* 88: 9051-9055.
2. Avarello, R., et al. 1992. Evidence for an ancestral alphoid domain on the long arm of human chromosome 2. *Hum. Genet.* 89: 247-249.
3. Umeda, M., et al. 2003. A novel nuclear protein, Twa1, and Muskelein comprise a complex with RanBPM. *Gene* 303: 47-54.
4. Regelman, J., et al. 2003. Catabolite degradation of fructose-1,6-bisphosphatase in the yeast *Saccharomyces cerevisiae*: a genome-wide screen identifies eight novel GID genes and indicates the existence of two degradation pathways. *Mol. Biol. Cell.* 14: 1652-1663.
5. Kobayashi, N., et al. 2007. RanBPM, Muskelein, p48EMLP, p44CTLH, and the armadillo-repeat proteins ARMC8 $\alpha$  and ARMC8 $\beta$  are components of the CTLH complex. *Gene* 396: 236-247.
6. Suzuki, T., et al. 2008. Proteasome-dependent degradation of  $\alpha$ -catenin is regulated by interaction with ARMC8 $\alpha$ . *Biochem. J.* 411: 581-591.
7. Tomaru, K., et al. 2010. Armadillo repeat containing 8 $\alpha$  binds to HRS and promotes HRS interaction with ubiquitinated proteins. *Open Biochem J.* 4: 1-8.

## CHROMOSOMAL LOCATION

Genetic locus: RMND5A (human) mapping to 2p11.2; Rmnd5a (mouse) mapping to 6 C1.

## SOURCE

RMND5A (D-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of RMND5A of human origin.

## 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.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-161200 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

RMND5A (D-13) is recommended for detection of RMND5A 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 RMND5B .

Suitable for use as control antibody for RMND5A siRNA (h): sc-94576, RMND5A siRNA (m): sc-152985, RMND5A shRNA Plasmid (h): sc-94576-SH, RMND5A shRNA Plasmid (m): sc-152985-SH, RMND5A shRNA (h) Lentiviral Particles: sc-94576-V and RMND5A shRNA (m) Lentiviral Particles: sc-152985-V.

Molecular Weight of RMND5A: 44 kDa.

## 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.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.