

# RBM4 (I-14): sc-82354

## BACKGROUND

RBM4 (RNA binding motif protein 4), also known as LARK, RBM4A, ZCRB3A or ZCCHC21, is a 364 amino acid protein that localizes to both the nucleus and the cytoplasm and contains one CCHC-type zinc finger and 2 RRM domains. Expressed ubiquitously, RBM4 interacts with Importin-12 (an association which results in the nuclear import of RBM4) and is thought to play a role in alternative splice site selection during pre-mRNA processing. RBM4 is downregulated in patients affected with fetal Down syndrome (DS), suggesting that RBM4 may be involved in the regulation of normal brain development. Multiple isoforms of RBM4 exist due to alternative splicing events. RBM4B (RNA binding motif protein 4B), also known as RBM30, is a 359 amino acid protein that functions in a similar manner to RBM4 and is involved in the regulation of alternative splicing.

## REFERENCES

1. Jackson, F.R., et al. 1997. A novel zinc finger-containing RNA-binding protein conserved from fruitflies to humans. *Genomics* 41: 444-452.
2. Bernert, G., et al. 2002. Manifold decreased protein levels of matrin-3, reduced motor protein HMP and hlark in fetal Down's syndrome brain. *Proteomics* 2: 1752-1757.
3. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 602571. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
4. Lin, J.C. and Tarn, W.Y. 2005. Exon selection in  $\alpha$ -tropomyosin mRNA is regulated by the antagonistic action of RBM4 and PTB. *Mol. Cell. Biol.* 25: 10111-10121.
5. Markus, M.A., et al. 2006. WT1 interacts with the splicing protein RBM4 and regulates its ability to modulate alternative splicing *in vivo*. *Exp. Cell Res.* 312: 3379-3388.
6. Kar, A., et al. 2006. RBM4 interacts with an intronic element and stimulates Tau exon 10 inclusion. *J. Biol. Chem.* 281: 24479-24488.

## CHROMOSOMAL LOCATION

Genetic locus: RBM4/RBM4B (human) mapping to 11q13.2; Rbm4/Rbm4b (mouse) mapping to 19 A.

## SOURCE

RBM4 (I-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of RBM4 of human origin.

## 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-82354 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

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

## APPLICATIONS

RBM4 (I-14) is recommended for detection of RBM4 and RBM4B of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g 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); non cross-reactive with family members RBM10 or RBM15.

RBM4 (I-14) is also recommended for detection of RBM4 and RBM4B in additional species, including equine, canine, bovine and porcine.

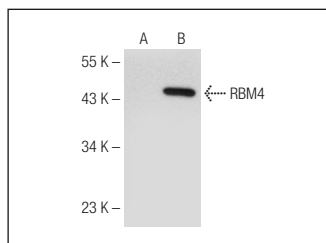
Molecular Weight of RBM4/RBM4B: 40 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, HeLa nuclear extract: sc-2120 or A-431 whole cell lysate: sc-2201.

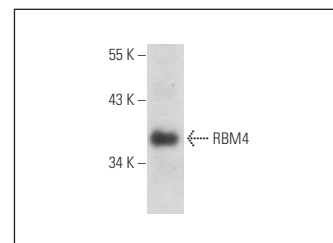
## RECOMMENDED SECONDARY REAGENTS

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

## DATA



RBM4 (I-14): sc-82354. Western blot analysis of RBM4 expression in non-transfected (A) and human RBM4 transfected (B) HEK293T whole cell lysates.



RBM4 (I-14): sc-82354. Western blot analysis of RBM4 expression in HeLa nuclear extract.

## RESEARCH USE

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



Try **RBM4 (E-3): sc-373852**, our highly recommended monoclonal alternative to RBM4 (I-14).