

# Raver1 (P-12): sc-132785

## BACKGROUND

Raver1, also known as ribonucleoprotein PTB-binding 1, is a widely expressed 606 amino acid protein that forms complexes with microfilament-associated proteins such as vinculin, metavinculin and  $\alpha$ -actin at microfilament attachment sites. Localized to either the nucleus or cytoplasm, Raver1 regulates alternative splicing events by associating with hnRNP I. With three RNA recognition motifs (RRM) near the N-terminus, Raver1 is thought to function as a potent splicing co-repressor by promotion of exon skipping. In myocytes, Raver1 has been shown to translocate from the nucleus to the cytoplasm, targeting the costamere. Here, it complexes with microfilament-associated proteins during muscle cell differentiation, which suggests that Raver1 may coordinate RNA targeting and processing as required for microfilament anchoring in adhesion sites. There are three isoforms of Raver1 due to alternative splicing events.

## REFERENCES

1. Markovtsov, V., et al. 2000. Cooperative assembly of an hnRNP complex induced by a tissue-specific homolog of polypyrimidine tract binding protein. *Mol. Cell. Biol.* 20: 7463-7479.
2. Hüttelmaier, S., et al. 2001. Raver1, a dual compartment protein, is a ligand for PTB/hnRNP I and microfilament attachment proteins. *J. Cell Biol.* 155: 775-786.
3. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 609950. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
4. Gromak, N., et al. 2003. The PTB interacting protein Raver1 regulates  $\alpha$ -tropomyosin alternative splicing. *EMBO J.* 22: 6356-6364.
5. Spellman, R., et al. 2005. Regulation of alternative splicing by PTB and associated factors. *Biochem. Soc. Trans.* 33: 457-460.
6. Kleinhenz, B., et al. 2005. Raver2, a new member of the hnRNP family. *FEBS Lett.* 579: 4254-4258.
7. Rideau, A.P., et al. 2006. A peptide motif in Raver1 mediates splicing repression by interaction with the PTB RRM2 domain. *Nat. Struct. Mol. Biol.* 13: 839-848.

## CHROMOSOMAL LOCATION

Genetic locus: RAVR1 (human) mapping to 19p13.2; Raver1 (mouse) mapping to 9 A3.

## SOURCE

Raver1 (P-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Raver1 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-132785 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

Raver1 (P-12) is recommended for detection of Raver1 isoforms 1, 2 and 3 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 family member Raver2.

Raver1 (P-12) is also recommended for detection of Raver1 isoforms 1, 2 and 3 in additional species, including equine, canine and bovine.

Suitable for use as control antibody for Raver1 siRNA (h): sc-97923, Raver1 siRNA (m): sc-152717, Raver1 shRNA Plasmid (h): sc-97923-SH, Raver1 shRNA Plasmid (m): sc-152717-SH, Raver1 shRNA (h) Lentiviral Particles: sc-97923-V and Raver1 shRNA (m) Lentiviral Particles: sc-152717-V.

Molecular Weight of Raver1: 80 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227.

## 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](http://www.scbt.com) or our catalog for detailed protocols and support products.