

TRBP2 (H-57): sc-292550

BACKGROUND

TRBP2, also known as TARBP2 (*trans*-activation-responsive (HIV-1) RNA binding protein 2), TRBP1 or TRBP, is a nuclear protein that contains three DRBM (double-stranded RNA-binding) domains. TRBP binds between the bulge and the loop of the HIV-1 TAR RNA regulatory element and activates HIV-1 gene expression in synergy with the viral Tat protein. The third DRBM motif in the C-terminus of human TRBP2 can interact with and inhibit PKR activity, thereby increasing HIV-1 long terminal repeat (LTR) expression. In addition, TRBP2 functions as a component of a Dicer-containing complex and associates with the catalytic subunit of the RNA-induced silencing complex (RISC), namely eIF2C2. TRBP2 is essential for Dicer stability and the proper assembly of RISC. This suggests that TRBP2, in association with Dicer, plays an important role in the processing of miRNAs (microRNAs).

REFERENCES

1. Gatignol, A., et al. 1991. Characterization of a human TAR RNA-binding protein that activates the HIV-1 LTR. *Science* 251: 1597-1600.
2. Zokak, C.A., et al. 1995. Genetic mapping in human and mouse of the locus encoding TRBP, a protein that binds the TAR region of the human immunodeficiency virus (HIV-1). *Genomics* 25: 66-72.
3. Gatignol, A., et al. 1996. Sequential steps in Tat *trans*-activation of HIV-1 mediated through cellular DNA, RNA, and protein binding factors. *Gene Expr.* 5: 217-228.
4. Braun, R.E. 2000. Temporal control of protein synthesis during spermatogenesis. *Int. J. Androl.* 23 Suppl. 2: 92-94.
5. Online Mendelian Inheritance in Man, OMIM[™]. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 605053. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
6. Dorin, D., et al. 2003. The TAR RNA-binding protein, TRBP, stimulates the expression of TAR-containing RNAs *in vitro* and *in vivo* independently of its ability to inhibit the dsRNA-dependent kinase PKR. *J. Biol. Chem.* 278: 4440-4448.
7. Gupta, V., et al. 2003. The carboxy-terminal, M3 motifs of PACT and TRBP have opposite effects on PKR activity. *Virology* 315: 283-291.
8. Chendrimada, T.P., et al. 2005. TRBP recruits the Dicer complex to ago2 for microRNA processing and gene silencing. *Nature* 436: 740-744.
9. Laraki, G., et al. 2008. Interactions between the double-stranded RNA-binding proteins TRBP and PACT define the medial domain that mediates protein-protein interactions. *RNA Biol.* 5: 92-103.

CHROMOSOMAL LOCATION

Genetic locus: TARBP2 (human) mapping to 12q13.13; Tarbp2 (mouse) mapping to 15 F3.

SOURCE

TRBP2 (H-57) is a rabbit polyclonal antibody raised against amino acids 68-124 mapping near the N-terminus of TRBP2 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.

APPLICATIONS

TRBP2 (H-57) is recommended for detection of TRBP2 of mouse, rat and 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)], 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).

TRBP2 (H-57) is also recommended for detection of TRBP2 in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for TRBP2 siRNA (h): sc-106846, TRBP2 siRNA (m): sc-154622, TRBP2 shRNA Plasmid (h): sc-106846-SH, TRBP2 shRNA Plasmid (m): sc-154622-SH, TRBP2 shRNA (h) Lentiviral Particles: sc-106846-V and TRBP2 shRNA (m) Lentiviral Particles: sc-154622-V.

Molecular Weight of TRBP2: 45 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker[™] compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (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.


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Try **TRBP2 (D-5): sc-514124**, our highly recommended monoclonal alternative to TRBP2 (H-57).