SANTA CRUZ BIOTECHNOLOGY, INC.

TRBP2 (D-5): sc-514124

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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).

CHROMOSOMAL LOCATION

Genetic locus: TARBP2 (human) mapping to 12q13.13.

SOURCE

TRBP2 (D-5) is a mouse monoclonal antibody raised against amino acids 68-124 mapping near the N-terminus of TRBP2 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

TRBP2 (D-5) is available conjugated to agarose (sc-514124 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-514124 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514124 PE), fluorescein (sc-514124 FITC), Alexa Fluor® 488 (sc-514124 AF488), Alexa Fluor® 546 (sc-514124 AF546), Alexa Fluor® 594 (sc-514124 AF594) or Alexa Fluor® 647 (sc-514124 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-514124 AF680) or Alexa Fluor® 790 (sc-514124 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

TRBP2 (D-5) is recommended for detection of TRBP2 of human origin by Western Blotting (starting dilution 1:100, 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).

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

Molecular Weight of TRBP2: 45 kDa.

Positive Controls: MCF7 whole cell lysate: sc-2206, HeLa whole cell lysate: sc-2200 or Hep G2 cell lysate: sc-2227.

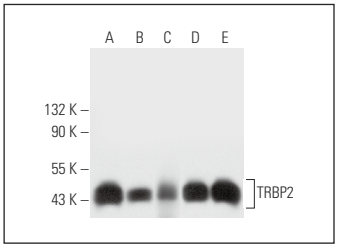
RESEARCH USE

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

STORAGE

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

DATA



TRBP2 (D-5): sc-514124. Western blot analysis of TRBP2 expression in MCF7 (**A**), Hep G2 (**B**), HEK293T (**C**), HeLa (**D**) and NTERA-2 cl.D1 (**E**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Starega-Roslan, J., et al. 2015. Nucleotide sequence of miRNA precursor contributes to cleavage site selection by Dicer. Nucleic Acids Res. 43: 10939-10951.
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4. van der Veen, A.G., et al. 2018. The RIG-I-like receptor LGP2 inhibits Dicer-dependent processing of long double-stranded RNA and blocks RNA interference in mammalian cells. EMBO J. 37: e97479.
5. Lou, Q., et al. 2019. RNA interference may suppresses stress granule formation by preventing argonaute 2 recruitment. Am. J. Physiol., Cell Physiol. 316: C81-C91.
6. Ling, T., et al. 2019. TARBP2 inhibits IRF7 activation by suppressing TRAF6-mediated K63-linked ubiquitination of IRF7. Mol. Immunol. 109: 116-125.
7. Jeppesen, D.K., et al. 2019. Reassessment of exosome composition. Cell 177: 428-445.e18.
8. Gao, J., et al. 2021. Merkel cell polyomavirus T-antigens regulate DICER1 mRNA stability and translation through HSC70. iScience 24: 103264.
9. Davidson, S., et al. 2022. Protein kinase R is an innate immune sensor of proteotoxic stress via accumulation of cytoplasmic IL-24. Sci. Immunol. 7: eabi6763.
10. Abou Zeid, L.Y., et al. 2022. Caspase-mediated cleavage of miRNA processing proteins Drosha, DGCR8, Dicer, and TRBP2 in heat-shocked cells and its inhibition by HSP70 overexpression. Cell Stress Chaperones 27: 11-25.

PROTOCOLS

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