SANTA CRUZ BIOTECHNOLOGY, INC.

translin (C-2): sc-390472

BACKGROUND

Translin, also designated testis brain-RNA-binding protein (TB-RBP), is a single-stranded DNA- and RNA-binding protein that binds to the 3' UTR regions (Y and H elements) of stored mRNAs, which suppresses their *in vitro* translation. The human translin gene maps to chromosome 2q21.1 and encodes a protein that has been highly conserved throughout evolution. Translin forms a ring-shaped structure, which is responsible for DNA binding, and also contains a leucine zipper motif, which is thought to enable translin to form dimers. Translin exports specific mRNAs out of the nucleus, supported by its localization in both the nuclei and cytoplasm of neurons, and regulates their translation. Association with Trax (translin-associated factor X), inhibits the binding of translin to RNA, but enhances its binding to single stranded DNA sequences. Breakpoints in the TLS/FUS and CHOP loci contain consensus recognition motifs of translin, which associates with chromosomal translocations in liposarcomas.

REFERENCES

1. Aoki, K., et al. 1997. Genomic structure and chromosomal localization of the gene encoding translin, a recombination hotspot binding protein. Genomics 43: 237-241.
2. Wu, X.Q., et al. 1998. Dimerization of the testis brain RNA-binding protein (translin) is mediated through its C-terminus and is required for DNA- and RNA-binding. Nucleic Acids Res. 26: 1675-1680.
3. Gu, W., et al. 1998. The RNA- and DNA-binding protein TB-RBP is spatially and developmentally regulated during spermatogenesis. Mol. Reprod. Dev. 49: 219-228.

CHROMOSOMAL LOCATION

Genetic locus: TSN (human) mapping to 2q14.3; Tsn (mouse) mapping to 1 E2.3.

SOURCE

translin (C-2) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 37-56 near the N-terminus of translin 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. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-390472 X, 200 µg/0.1 ml.

translin (C-2) is available conjugated to agarose (sc-390472 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-390472 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390472 PE), fluorescein (sc-390472 FITC), Alexa Fluor® 488 (sc-390472 AF488), Alexa Fluor® 546 (sc-390472 AF546), Alexa Fluor® 594 (sc-390472 AF594) or Alexa Fluor® 647 (sc-390472 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390472 AF680) or Alexa Fluor® 790 (sc-390472 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-390472 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

translin (C-2) is recommended for detection of translin of mouse, rat and 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).

translin (C-2) is also recommended for detection of translin in additional species, including equine, canine, bovine and porcine.

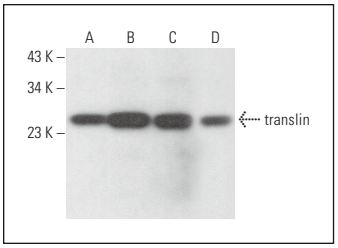
Suitable for use as control antibody for translin siRNA (h): sc-38600, translin siRNA (m): sc-38601, translin shRNA Plasmid (h): sc-38600-SH, translin shRNA Plasmid (m): sc-38601-SH, translin shRNA (h) Lentiviral Particles: sc-38600-V and translin shRNA (m) Lentiviral Particles: sc-38601-V.

translin (C-2) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

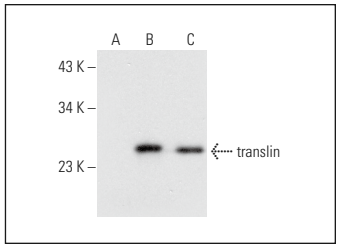
Molecular Weight of translin: 26 kDa.

Positive Controls: translin (m): 293T Lysate: sc-124256, HeLa whole cell lysate: sc-2200 or Jurkat whole cell lysate: sc-2204.

DATA



translin (C-2): sc-390472. Western blot analysis of translin expression in Jurkat (**A**), HeLa (**B**), SUP-T1 (**C**) and MOLT-4 (**D**) whole cell lysates.



translin (C-2): sc-390472. Western blot analysis of translin expression in non-transfected 293T: sc-117752 (**A**), mouse translin transfected 293T: sc-124256 (**B**) and Jurkat (**C**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Britten, J.L., et al. 2019. Ulipristal acetate mediates decreased proteoglycan expression through regulation of nuclear factor of activated T-cells (NFAT5). Reprod. Sci. 26: 184-197.

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 for detailed protocols and support products.