

TRAX (E-11): sc-271632

BACKGROUND

TRAX (translin-associated factor X), also known as TSNAX, is a nuclear protein that interacts with translin, a DNA-binding protein involved in breakpoint junctions of chromosomal translocations. Expressed highly in the brain and testis, TRAX contains an N-terminal bipartite nuclear localization signal (NLS) and a leucine zipper domain. The NLS may be involved in the nuclear transport of translin, while the leucine zipper domain is essential for interactions between TRAX and other proteins. When TRAX is complexed with translin, the two proteins can interact with the protein kinase activator C1D, allowing the complex to participate in DNA double-stranded break repair and dendritic RNA processing. TRAX also functions as a transcriptional regulator of GAP-43, a growth-associated protein found in growth cones, suggesting a possible role in axonal regeneration and cell proliferation.

REFERENCES

1. Finkenstadt, P.M., et al. 2002. TRAX is a component of the translin-containing RNA binding complex. *J. Neurochem.* 83: 202-210.
2. Wu, R.F., et al. 2003. Identification of translin/TRAX complex as a glucose response element binding protein in liver. *Biochim. Biophys. Acta* 1624: 29-35.
3. Cho, Y.S., et al. 2004. The relative levels of translin-associated factor X (TRAX) and testis brain RNA-binding protein determine their nucleocytoplasmic distribution in male germ cells. *J. Biol. Chem.* 279: 31514-31523.
4. Bray, J.D., et al. 2004. KIF2A β : a kinesin family member enriched in mouse male germ cells, interacts with translin associated factor-X (TRAX). *Mol. Reprod. Dev.* 69: 387-396.
5. Gupta, G.D., et al. 2005. Co-expressed recombinant human translin-TRAX complex binds DNA. *FEBS Lett.* 579: 3141-3146.
6. Laufman, O., et al. 2005. Cloning and characterization of the *Schizosaccharomyces pombe* homologs of the human protein translin and the translin-associated protein TRAX. *Nucleic Acids Res.* 33: 4128-4139.
7. Claussen, M., et al. 2006. Functional characterization of *Drosophila* translin and TRAX. *Genetics* 174: 1337-1347.

CHROMOSOMAL LOCATION

Genetic locus: TSNAX (human) mapping to 1q42.2; Tsnax (mouse) mapping to 8 E2.

SOURCE

TRAX (E-11) is a mouse monoclonal antibody raised against amino acids 1-290 representing full length TRAX of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ 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-271632 X, 200 μ g/0.1 ml.

RESEARCH USE

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

APPLICATIONS

TRAX (E-11) is recommended for detection of TRAX of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ 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).

Suitable for use as control antibody for TRAX siRNA (h): sc-76726, TRAX siRNA (m): sc-76727, TRAX shRNA Plasmid (h): sc-76726-SH, TRAX shRNA Plasmid (m): sc-76727-SH, TRAX shRNA (h) Lentiviral Particles: sc-76726-V and TRAX shRNA (m) Lentiviral Particles: sc-76727-V.

TRAX (E-11) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

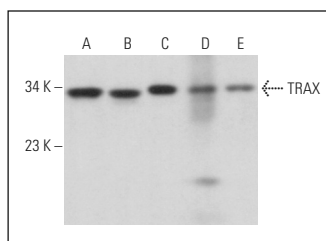
Molecular Weight of TRAX: 33 kDa.

Positive Controls: MCF7 whole cell lysate: sc-2206, NIH/3T3 whole cell lysate: sc-2210 or Neuro-2A whole cell lysate: sc-364185.

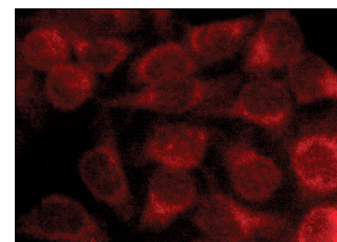
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



TRAX (E-11): sc-271632. Western blot analysis of TRAX expression in MCF7 (A), NIH/3T3 (B) and Neuro-2A (C) whole cell lysates and rat lung (D) and rat brain (E) tissue extracts.



TRAX (E-11): sc-271632. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Garwain, O. and Scarlata, S. 2016. Phospholipase C β -TRAX association is required for PC-12 cell differentiation. *J. Biol. Chem.* 291: 22970-22976.

STORAGE

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