

# TARDBP (H-89): sc-292299

## BACKGROUND

TARDBP (TAR DNA binding protein), also known as TDP-43, is a nuclear protein that contains two RRM (RNA recognition motif) domains. Ubiquitously expressed with highest levels found in placenta, lung, pancreas, spleen and genital tract, TARDBP functions as a DNA-binding protein and specifically binds to the TAR DNA sequence motifs of HIV. Via this association with TAR motifs, TARDBP acts as a transcriptional repressor and inhibits HIV-1 transcription. TARDBP can also function as a negative regulator of splicing activity and is known to be involved in the splicing of CFTR (cystic fibrosis transmembrane receptor). In addition, TARDBP is a major component of ubiquitin-positive inclusion bodies that are prominent in many neurodegenerative diseases. This suggests that TARDBP may play a role in the development of neurodegenerative disorders. Due to alternative splicing events, various isoforms exist for TARDBP.

## REFERENCES

1. Ou, S.H., et al. 1995. Cloning and characterization of a novel cellular protein, TDP-43, that binds to human immunodeficiency virus type 1 TAR DNA sequence motifs. *J. Virol.* 69: 3584-3596.
2. Buratti, E., et al. 2001. Nuclear factor TDP-43 and SR proteins promote *in vitro* and *in vivo* CFTR exon 9 skipping. *EMBO J.* 20: 1774-1784.
3. Online Mendelian Inheritance in Man, OMIM<sup>™</sup>. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 605078. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
4. Groman, J.D., et al. 2004. Variation in a repeat sequence determines whether a common variant of the cystic fibrosis transmembrane conductance regulator gene is pathogenic or benign. *Am. J. Hum. Genet.* 74: 176-179.
5. Buratti, E., et al. 2004. Nuclear factor TDP-43 binds to the polymorphic TG repeats in CFTR intron 8 and causes skipping of exon 9: a functional link with disease penetrance. *Am. J. Hum. Genet.* 74: 1322-1325.
6. Wang, H.Y., et al. 2004. Structural diversity and functional implications of the eukaryotic TDP gene family. *Genomics* 83: 130-139.

## CHROMOSOMAL LOCATION

Genetic locus: TARDBP (human) mapping to 1p36.22; Tardbp (mouse) mapping to 4 E2.

## SOURCE

TARDBP (H-89) is a rabbit polyclonal antibody raised against amino acids 1-89 mapping at the N-terminus of TARDBP 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. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-292299 X, 200 µg/0.1 ml.

## RESEARCH USE

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

## APPLICATIONS

TARDBP (H-89) is recommended for detection of TARDBP 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).

TARDBP (H-89) is also recommended for detection of TARDBP in additional species, including equine, canine, bovine and avian.

Suitable for use as control antibody for TARDBP siRNA (h): sc-88586, TARDBP siRNA (m): sc-154072, TARDBP shRNA Plasmid (h): sc-88586-SH, TARDBP shRNA Plasmid (m): sc-154072-SH, TARDBP shRNA (h) Lentiviral Particles: sc-88586-V and TARDBP shRNA (m) Lentiviral Particles: sc-154072-V.

TARDBP (H-89) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of TARDBP: 43 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, Hep G2 cell lysate: sc-2227 or A-431 whole cell lysate: sc-2201.

## 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<sup>™</sup> compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker<sup>™</sup> 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<sup>™</sup> 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.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.



Try **TARDBP (E-10): sc-376311** or **TARDBP (H-8): sc-376532**, our highly recommended monoclonal alternatives to TARDBP (H-89).