

TBR-1 (M-200): sc-48816

BACKGROUND

A novel murine and human gene, TBR-1, encodes a putative transcription factor related to the brachyury (T) gene that is expressed only in postmitotic cells. T-brain-1 (TBR-1) mRNA is largely restricted to the cerebral cortex, where, during embryogenesis, it defines different regions that give rise to the paleocortex, limbic cortex and neocortex. TBR-1, Pax-6 and Emx-1 are expressed in the mouse and chicken pallium. The pallio-subpallial boundary lies at the interface between the TBR-1 and Dlx-2 expression domains. Chicken genes homologous to these mouse genes are expressed in topologically comparable patterns during development, suggesting that mouse and chicken may have similar histogenetic specification processes and field homologies. CASK/LIN-2, a membrane-associated guanylate kinase, is required for EGFR localization and signaling. In adult rat brain, CASK is concentrated at neuronal synapses and binds to the cell-surface proteins. CASK can interact with TBR-1, which is involved in forebrain development. CASK enters into the nucleus and binds to a specific DNA sequence (the T-element) in a complex with TBR-1. Thus, CASK acts as a coactivator of TBR-1 to induce transcription of T-element containing genes, including reelin.

CHROMOSOMAL LOCATION

Genetic locus: TBR1 (human) mapping to 2q24.2; Tbr1 (mouse) mapping to 2 C1.3.

SOURCE

TBR-1 (M-200) is a rabbit polyclonal antibody raised against amino acids 1-200 mapping at the N-terminus of TBR-1 of mouse 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-48816 X, 200 µg/0.1 ml.

APPLICATIONS

TBR-1 (M-200) is recommended for detection of TBR-1 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).

TBR-1 (M-200) is also recommended for detection of TBR-1 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for TBR-1 siRNA (h): sc-44141, TBR-1 siRNA (m): sc-60034, TBR-1 shRNA Plasmid (h): sc-44141-SH, TBR-1 shRNA Plasmid (m): sc-60034-SH, TBR-1 shRNA (h) Lentiviral Particles: sc-44141-V and TBR-1 shRNA (m) Lentiviral Particles: sc-60034-V.

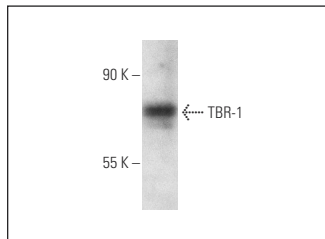
TBR-1 (M-200) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of TBR-1: 74 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.

DATA



TBR-1 (M-200): sc-48816. Western blot analysis of TBR-1 expression in human hippocampus tissue extract.

SELECT PRODUCT CITATIONS

- Kolk, S.M., et al. 2009. Semaphorin 3F is a bifunctional guidance cue for dopaminergic axons and controls their fasciculation, channeling, rostral growth, and intracortical targeting. *J. Neurosci.* 29: 12542-12557.
- Domínguez, L., et al. 2011. Ontogenetic distribution of the transcription factor *nkx2.2* in the developing forebrain of *Xenopus laevis*. *Front. Neuroanat.* 5: 11.
- Domínguez, L., et al. 2013. Characterization of the hypothalamus of *Xenopus laevis* during development. I. The alar regions. *J. Comp. Neurol.* 521: 725-759.

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.


 MONOS
Satisfaction
Guaranteed

Try **TBR-1 (G-5): sc-376258**, our highly recommended monoclonal alternative to TBR-1 (M-200).