Anti-TBR1 Antibody

IRS070



Product Type: Recombinant Rabbit monoclonal IgG, primary antibodies

Species reactivity: Mouse
Applications: mIHC

Molecular Wt: Predicted band size: 74 kDa

Description: A novel murine and human gene, TBR-1, encodes a putative transcription factor related to

the Brachyrury (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 palecortex, 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 homologus 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.

Immunogen: Synthetic peptide within Human TBR1 aa 30-75 / 682.

Positive control: Mouse brain tissue.

Subcellular location: Nucleus.

Database links: SwissProt: Q64336 Mouse

Recommended Dilutions:

mIHC 1:100

Storage Buffer: PBS (pH7.4), 0.1% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.

Storage Instruction: Store at +4 $^{\circ}$ C after thawing. Aliquot store at -20 $^{\circ}$ C or -80 $^{\circ}$ C. Avoid repeated freeze / thaw

cycles.

Purity: Protein A affinity purified.

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Images

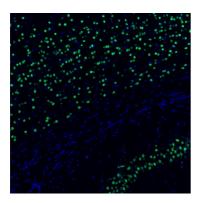


Fig1: mIHC analysis of mouse brain tissue (Formalin/PFA-fixed paraffin-embedded sections) with Rabbit anti-TBR1 antibody (IRS070) at 1/100 dilution. The immunostaining was performed with the IRISKit® HyperView mTSA Kit (MH900206). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 30 mins at $95\,^{\circ}\mathrm{C}$. DAPI (blue) was used as a nuclear counter stain. Image acquisition was performed with Olympus VS200 Slide Scanner.

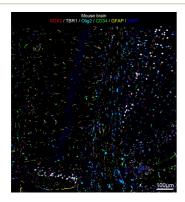


Fig2: mIHC analysis of mouse brain tissue (Formalin/PFA-fixed paraffin-embedded sections) with SOX2, TBR1 (IRS070), Olig2 (IRS067), CD34 (IRS050) and GFAP (IRS069) antibody at 1/100 dilution. The immunostaining was performed with the IRISKit® HyperView mTSA Kit (MH900206). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 30 mins at 95 ℃. DAPI (blue) was used as a nuclear counter stain. Image acquisition was performed with Olympus VS200 Slide Scanner.

Note: All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE".

Background References

- 1. Nagao M et al. Zbtb20 promotes astrocytogenesis during neocortical development. Nat Commun 7:11102 (2016).
- 2. Notwell JH et al. TBR1 regulates autism risk genes in the developing neocortex. Genome Res 26:1013-22 (2016).