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TBR1 Recombinant Rabbit mAb

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Catalog # AP94802

Product Information

Application	WB, IHC-P, IHC-F, IF
Primary Accession	Q64336
Reactivity	Rat, Human, Mouse
Host	Rabbit
Clonality	Recombinant
Calculated MW	73940
Physical State	Liquid
Immunogen	A synthesized peptide derived from human TBR1
Epitope Specificity	2-57/682
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS(pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SUBCELLULAR LOCATION	Nuclea
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	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 (1-3). 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 homolgous 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 (4). 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 (5).

Additional Information

Gene ID	21375
Other Names	T-box brain protein 1, T-brain-1, TBR-1, TES-56, Tbr1
Dilution	WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500

Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

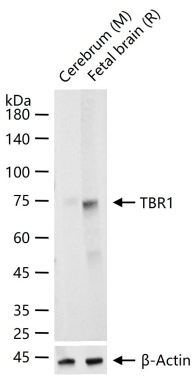
Protein Information

Name	Tbr1
Function	Transcriptional repressor involved in multiple aspects of cortical development, including neuronal migration, laminar and areal identity, and axonal projection (PubMed:11239428, PubMed:21285371, PubMed:9883721). As transcriptional repressor of FEZF2, it blocks the formation of the corticospinal (CS) tract from layer 6 projection neurons, thereby restricting the origin of CS axons specifically to layer 5 neurons (PubMed:21285371).
Cellular Location	Nucleus {ECO:0000250|UniProtKB:Q16650}.
Tissue Location	Expressed in the developing and adult cortex (PubMed:11239428). Expressed in the olfactory bulbs (PubMed:9883721)

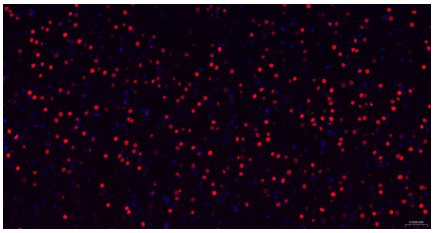
Background

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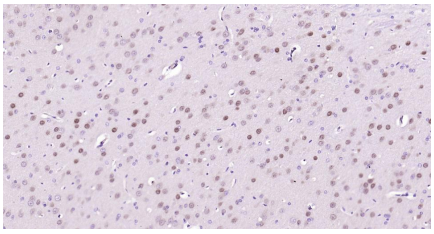
Images



25 ug total protein per lane of various lysates (see on figure) probed with TBR1 monoclonal antibody, unconjugated (AP94802) at 1:2000 dilution and 4°C overnight incubation. Followed by conjugated secondary antibody incubation at r.t. for 60 min.



Paraformaldehyde-fixed, paraffin embedded Rat Cerebrum; Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15 min; The section was incubated with TBR1 Monoclonal Antibody, Unconjugated (AP94802) at 1:200 overnight at 4°C. Followed by conjugated Goat Anti-Rabbit IgG antibody (Red, AP94802-BF594), DAPI (blue, C02-04002) was used to stain the cell nuclei.



Paraformaldehyde-fixed, paraffin embedded Rat Cerebrum; Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15 min; Antibody incubation with TBR1 Monoclonal Antibody, Unconjugated(AP94802) at 1:200 overnight at 4°C, followed by conjugation to the AP94802-HRP and DAB (C-0010) staining.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.