Anti-TBR1 Antibody [JF10-00] - BSA and Azide free

HA750366

Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human, Mouse, Rat, Cynomolgus monkey, Pig
Applications:	WB, IHC-P, IF-Tissue, IHC-Fr
Molecular Wt:	Predicted band size: 74 kDa
Clone number:	JF10-00

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 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. 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: Human brain tissue lysates, mouse brain tissue lysates, rat brain tissue lysates, human brain tissue, mouse brain tissue, rat brain tissue, mouse hippocampus tissue, rat hippocampus tissue, E14.5 mouse embryonic brain tissue.

Subcellular location: Nucleus.

Database links: SwissProt: Q16650 Human | Q64336 Mouse
Entrez Gene: 680427 Rat

Storage Buffer: 1*PBS (pH7.4).

Storage Instruction: Store at 2-8℃. Avoid freeze.

Purity: Protein A affinity purified.

Images

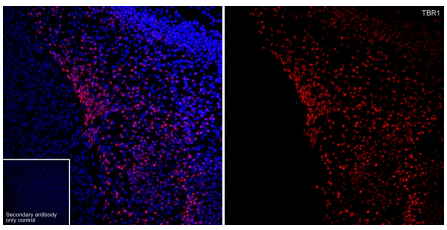

Fig1: This data was developed using ET1702-97, the same antibody clone in a different buffer formulation.
Application: IHC-Fr

Species: Mouse

Site: Cerebral cortex (P0)

Sample: Frozen section

Antibody concentration: 1:1,000

Antigen retrieval: Not required

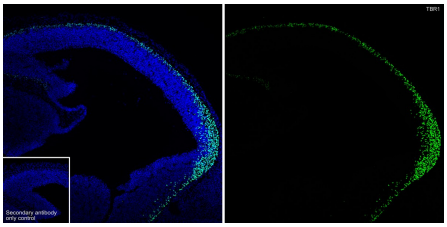

Fig2: This data was developed using ET1702-97, the same antibody clone in a different buffer formulation.
Application: IHC-Fr

Species: Mouse

Site: E14.5 embryonic brain

Sample: Frozen section

Antibody concentration: 1:500

Antigen retrieval: Not required

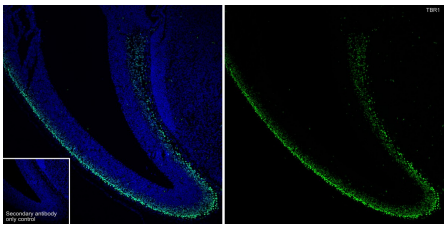

Fig3: This data was developed using ET1702-97, the same antibody clone in a different buffer formulation.
Application: IF-tissue

Species: Mouse

Site: E14.5 embryonic brain

Sample: Paraffin-embedded section

Antibody concentration: 1:500

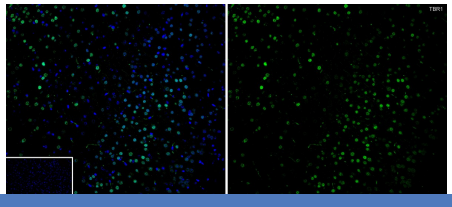

Fig4: This data was developed using ET1702-97, the same antibody clone in a different buffer formulation.
Immunofluorescence analysis of paraffin-embedded mouse brain tissue labeling TBR1 with Rabbit anti-TBR1 antibody (ET1702-97) at 1/500 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 10% negative goat serum for 1 hour at room temperature, washed with PBS, and then probed with the primary

counterstained with DAPI (blue).

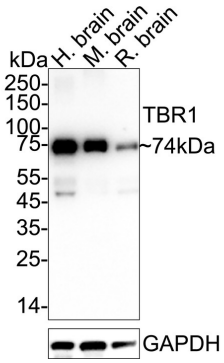

Fig5: This data was developed using ET1702-97, the same antibody clone in a different buffer formulation.
Western blot analysis of TBR1 on different lysates with Rabbit anti-TBR1 antibody (ET1702-97) at 1/1,000 dilution.

Lane 1: Human brain tissue lysate (40 µg/Lane)
Lane 2: Mouse brain tissue lysate (40 µg/Lane)
Lane 3: Rat brain tissue lysate (40 µg/Lane)

Predicted band size: 74 kDa
Observed band size: 74 kDa

Exposure time: 1 minute; ECL: K1801;
4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (ET1702-97) at 1/1,000 dilution was used in 5% NFDM/TBST at 4℃ overnight. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1/50,000 dilution was used for 1 hour at room temperature.

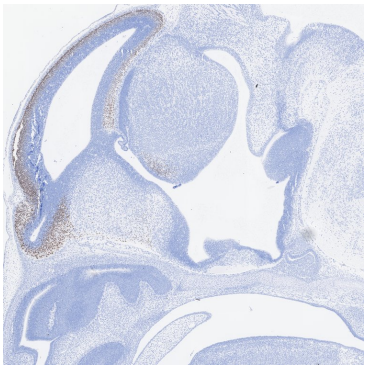

Fig6: This data was developed using ET1702-97, the same antibody clone in a different buffer formulation.
Immunohistochemical analysis of paraffin-embedded mouse embryo tissue with Rabbit anti-TBR1 antibody (ET1702-97) at 1/2,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0) (high pressure) for 2 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (ET1702-97) at 1/2,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

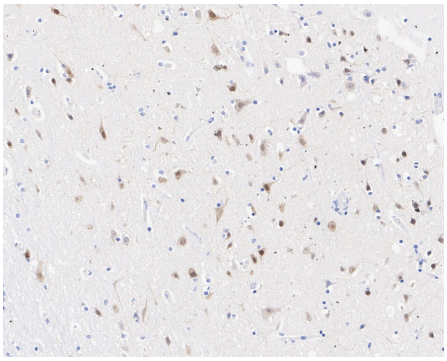

Fig7: This data was developed using ET1702-97, the same antibody clone in a different buffer formulation.
Immunohistochemical analysis of paraffin-embedded human brain tissue with Rabbit anti-TBR1 antibody (ET1702-97) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0) (high pressure) for 2 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (ET1702-97) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the

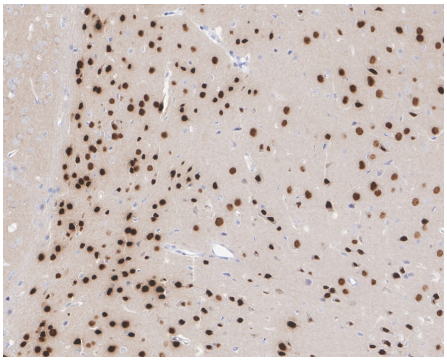

Fig8: This data was developed using ET1702-97, the same antibody clone in a different buffer formulation.
Immunohistochemical analysis of paraffin-embedded mouse brain tissue with Rabbit anti-TBR1 antibody (ET1702-97) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0) (high pressure) for 2 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (ET1702-97) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

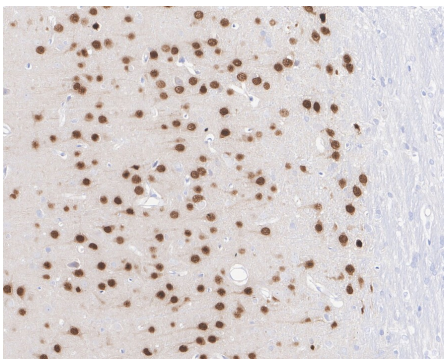

Fig9: This data was developed using ET1702-97, the same antibody clone in a different buffer formulation.
Immunohistochemical analysis of paraffin-embedded rat brain tissue with Rabbit anti-TBR1 antibody (ET1702-97) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0) (high pressure) for 2 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (ET1702-97) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

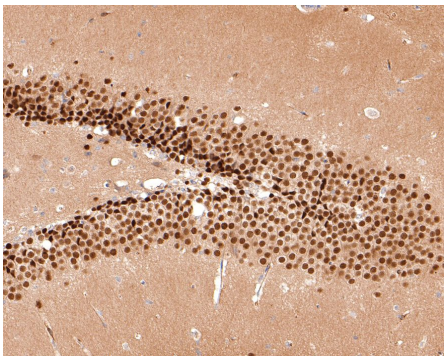

Fig10: This data was developed using ET1702-97, the same antibody clone in a different buffer formulation.
Immunohistochemical analysis of paraffin-embedded mouse hippocampus tissue with Rabbit anti-TBR1 antibody (ET1702-97) at 1/500 dilution.

The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0) (high pressure) for 2 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (ET1702-97) at 1/500 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

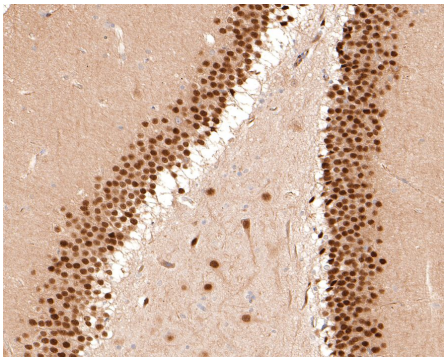

Fig11: This data was developed using ET1702-97, the same antibody clone in a different buffer formulation.
Immunohistochemical analysis of paraffin-embedded rat hippocampus tissue with Rabbit anti-TBR1 antibody (ET1702-97) at 1/500 dilution.

The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0) (high pressure) for 2 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (ET1702-97) at 1/500 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

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

Background References

1. Crespo I et al. Tbr1 Misexpression Alters Neuronal Development in the Cerebral Cortex. Mol Neurobiol. 2022 Sep
2. Sollis E et al. Characterization of the TBR1 interactome: variants associated with neurodevelopmental disorders disrupt novel protein interactions. Hum Mol Genet. 2023 Apr