Revision 3

#49661 Store at -20C

TBR1 (D6C6X) Rabbit mAb

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
IHC-P, IF-F	H M R	Endogenous (IHC-P, IF-F), Transfected (W)	74	Rabbit IgG	#Q16650	10716

Product Usage Information

Application	Dilution
Immunohistochemistry (Paraffin)	1:250
Immunofluorescence (Frozen)	1:400

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at –20°C. Do not aliquot the antibody.

For a carrier free (BSA and azide free) version of this product see product #42120.

Specificity / Sensitivity

TBR1 (D6C6X) Rabbit mAb recognizes endogenous levels of total TBR1 protein. Low levels of nuclear staining of unknown specificity have been observed in mouse small intestine, spleen, and pancreas.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Pro415 of human TBR1 protein.

Background

T-box, brain, 1 (TBR1) is a transcription factor important in vertebrate embryo development. As a member of T-Box family of transcription factors, TBR1 is expressed in postmitotic glutamatergic projection neurons (1). During cortical neurogenesis, sequential expression of transcription factors Pax6, TBR2, and TBR1 regulates discrete steps in projection neuron differentiation (2). TBR1 is enriched in layer 6 of the developing cortex. In the absence of TBR1, *TBR1* mutants exhibit profound defects in frontal cortex and layer 6 differentiation, suggesting that TBR1 regulates regional and laminar identity of postmitotic cortical neurons (3). Therefore, TBR1 expression can be used as a marker for postmitotic glutamatergic neurons and cortical laminar specificity.

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Background References

1. Hevner, R.F. et al. (2001) *Neuron* 29, 353-66.
2. Englund, C. et al. (2005) *J Neurosci* 25, 247-51.
3. Bedogni, F. et al. (2010) *Proc Natl Acad Sci U S A* 107, 13129-34.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Applications Key

IHC-P: Immunohistochemistry (Paraffin) **IF-F:** Immunofluorescence (Frozen)

Cross-Reactivity Key

H: human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **Mi:** mink **C:** chicken **Dm:** D. melanogaster **X:** Xenopus **Z:** zebrafish **B:** bovine **Dg:** dog **Pg:** pig **Sc:** S. cerevisiae **Ce:** C. elegans **Hr:** horse **GP:** Guinea Pig **Rab:** rabbit **All:** all species expected

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