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OLIG2 Antibody
Catalog # ASC11783

Specification

OLIG2 Antibody - Product Information

Application	**WB, IHC-P, IF, E**
Primary Accession	Q13516
Other Accession	NP_005797, 10215
Reactivity	**Human, Mouse, Rat**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**IgG**
Calculated MW	**Predicted: 36 kDa** **Observed: 37 kDa KDa**
Application Notes	**OLIG2 antibody can be used for detection of OLIG2 by Western blot at 1 - 2 µg/ml. Antibody can also be used for Immunohistochemistry at 5 µg/mL. For Immunoflorescence start at 20 µg/mL.**

OLIG2 Antibody - Additional Information

Gene ID **10215**

Target/Specificity
OLIG2 antibody was raised against a 15 amino acid peptide near the amino terminus of human OLIG2.

The immunogen is located within amino acids 80 - 130 of OLIG2.

Reconstitution & Storage
OLIG2 antibody can be stored at 4℃ for three months and -20℃, stable for up to one year.

Precautions
OLIG2 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

OLIG2 Antibody - Protein Information

Name OLIG2

Synonyms BHLHB1, BHLHE19, PRKCBP2, RACK17

Function
Required for oligodendrocyte and motor neuron specification in the spinal cord, as well as for the development of somatic motor neurons in the hindbrain. Functions together with ZNF488 to promote oligodendrocyte differentiation. Cooperates with OLIG1 to establish the pMN domain of the embryonic neural tube. Antagonist of V2 interneuron and of NKX2-2-induced V3 interneuron development.

Cellular Location

Nucleus {ECO:0000255|PROSITE-ProRule:PRU00981}. Cytoplasm. Note=The NLS contained in the bHLH domain could be masked in the native form and translocation to the nucleus could be mediated by interaction either with class E bHLH partner protein or with NKX2-2.

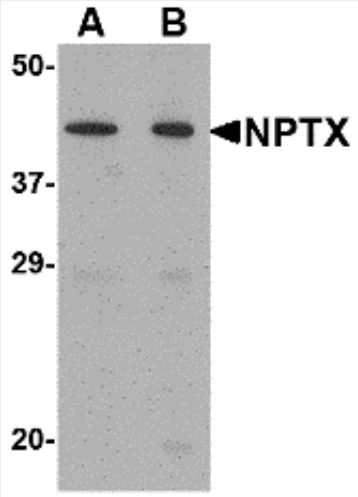
Tissue Location
Expressed in the brain, in oligodendrocytes. Strongly expressed in oligodendrogliomas, while expression is weak to moderate in astrocytomas. Expression in glioblastomas highly variable

OLIG2 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

OLIG2 Antibody - Images



Western blot analysis of NPTX2 in mouse brain tissue lysate with NPTX2 antibody at (A) 0.5 and (B) 1 µg/mL.

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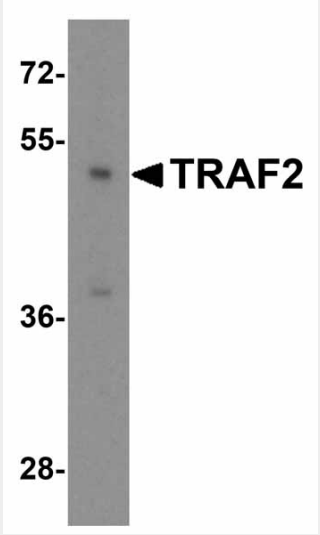

Western blot analysis of TRAF2 in mouse liver tissue lysate with TRAF2 antibody at 1 µg/mL.

OLIG2 Antibody - Background

The oligodendrocyte transcription factors 1 and 2 (OLIG1 and OLIG2, respectively) make up part of basic helix-loop-helix (bHLH) family of transcription factors that are specifically expressed in zones of the neuroepithelium from which oligodendrocyte precursors emerge (1). Both OLIG1 and OLIG2 genes are downstream targets of Sonic hedgehog and are expressed exclusively in the central nervous system (2). OLIG2 is first observed in the ventral most p3 progenitor domain of the ventral neural tube while OLIG1 is first expressed in the dorsal portion of the p3 domain (2). Mice overexpressing OLIG2 exhibit impaired potassium channel expression in neural progenitors and proliferation of these cells similar to that seen in Down Syndrome, suggesting that OLIG2 may play a role in this pathology (3).

OLIG2 Antibody - References

Zhou Q, Wang S, and Anderson DJ. Identification of a novel family of oligodendrocyte lineage-specific basic helix-loop-helix transcription factors. Neuron 2000; 25:331-43.
Lu QR, Yuk D, Alberta JA, et al. Sonic Hedgehog-regulated oligodendrocyte lineage genes encoding bHLH proteins in the mammalian central nervous system. Neuron 2000; 25:317-29.
Lu J, Lian G, Zhou H, et al. OLIG2 over-expression impairs proliferation of human Down syndrome neural progenitors. Hum. Mol. Genet. 2012; 21:2330-40.