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OLIG1 Rabbit pAb

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Catalog # AP59034

Product Information

Application	IHC-P, IHC-F, IF
Primary Accession	Q8TAK6
Reactivity	Human
Predicted	Rat, Pig, Dog, Mouse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	27905
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human OLIG1
Epitope Specificity	121-220/271
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	Nucleus.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	The oligodendrocyte lineage-specific basic helix-loop-helix (OLIG) family of transcription factors include OLIG1-OLIG3, which differ in tissue expression. OLIG1 and OLIG2 are specifically expressed in nervous tissue as gene regulators of oligodendrogenesis. OLIG2 is more widely expressed in embryonic brain than OLIG1, while OLIG3 is primarily expressed in non-neural tissues. OLIG1 and OLIG2 interact with the Nkx-2.2 homeodomain protein, which is responsible for directing ventral neuronal patterning in response to graded Sonic hedgehog signaling in the embryonic neural tube. These interactions between OLIG proteins and Nkx-2.2 appear to promote the formation of alternate cell types by inhibiting V3 interneuron development. OLIG1 and OLIG2 are abundantly expressed in oligodendroglioma and nearly absent in astrocytomas. Therefore, OLIG proteins are candidates for molecular markers of human glial brain tumors, which are the most common primary malignancies of the human brain.

Additional Information

Gene ID	116448
Other Names	Oligodendrocyte transcription factor 1, Oligo1, Class B basic helix-loop-helix protein 6, bHLHb6, Class E basic helix-loop-helix protein 21, bHLHe21, OLIG1, BHLHB6, BHLHE21
Dilution	IHC-P=1:100-500,IHC-F=1:100-500,IF=1:50-200

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.

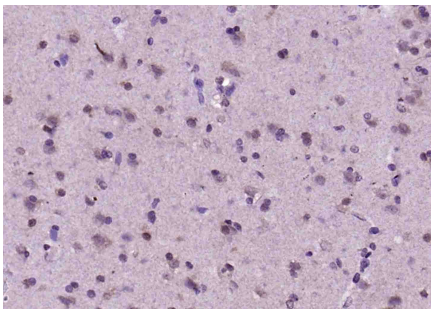
Protein Information

Name	OLIG1
Synonyms	BHLHB6, BHLHE21
Function	Orchestrates progenitor cell fates during cortical gliogenesis and gliomagenesis. In cooperation with OLIG2, activates oligodendrocyte precursor cells (OPCs) formation while repressing the generation of olfactory bulb interneuron intermediate progenitors (OBIN) through transcriptional regulation of GSX2. Mechanistically, binds and silences multiple conserved enhancer elements of GSX2. Cooperates with OLIG2 to establish the pMN domain of the embryonic neural tube (By similarity).
Cellular Location	Nucleus {ECO:0000255|PROSITE-ProRule:PRU00981}.
Tissue Location	Expressed in the brain, in oligodendrocytes. Strongly expressed in oligodendrogliomas, while expression is weak to moderate in astrocytomas. Expression in glioblastomas is highly variable.

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Images



Paraformaldehyde-fixed, paraffin embedded (human brain glioma); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Incubation with (OLIG1) Polyclonal Antibody, Unconjugated (AP59034) at 1:200 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructionsand DAB staining.

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