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Phospho-Ser10,13,14 Olig2 Antibody

Affinity purified rabbit polyclonal antibody
Catalog # AN1249

Specification

Phospho-Ser10,13,14 Olig2 Antibody - Product Information

Application	**WB**
Primary Accession	Q13516
Reactivity	**Rat**
Predicted	**Human, Mouse, Pig, Monkey, Zebrafish**
Host	**Rabbit**
Clonality	**polyclonal**
Calculated MW	**32 KDa**

Phospho-Ser10,13,14 Olig2 Antibody - Additional Information

Gene ID	**10215**
Gene Name	**OLIG2**

Other Names
Oligodendrocyte transcription factor 2, Oligo2, Class B basic helix-loop-helix protein 1, bHLHb1, Class E basic helix-loop-helix protein 19, bHLHe19, Protein kinase C-binding protein 2, Protein kinase C-binding protein RACK17, OLIG2, BHLHB1, BHLHE19, PRKCBP2, RACK17

Target/Specificity
Synthetic phospho-peptide corresponding to amino acid residues surrounding Ser10,13,14 conjugated to KLH.

Dilution
WB~~ 1:1000

Format
Prepared from rabbit serum by affinity purification via sequential chromatography on phospho- and dephosphopeptide affinity columns.

Antibody Specificity
Specific for the ~32k Olig2 phosphorylated at Ser10, Ser13, and Ser14.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
Phospho-Ser10,13,14 Olig2 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

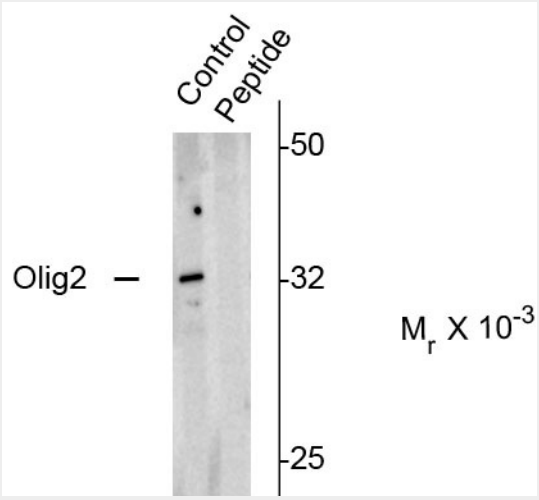
Shipping
Blue Ice

Phospho-Ser10,13,14 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

Phospho-Ser10,13,14 Olig2 Antibody - Images



Western blot of rat neonatal brain lysate showing specific immunolabeling of the ~ 32k form of the Olig2 protein phosphorylated at Ser10,13,14. Immunolabeling is blocked by the phospho-peptide used as antigen (peptide), but not by the corresponding dephospho-peptide (not shown).

Phospho-Ser10,13,14 Olig2 Antibody - Background

Olig2 is a well conserved bHLH transcription factor that shows both anti-neural functions and pro-neural functions at different stages in the formation of the oligodendrocyte lineage (Sun et al., 2011). Olig2 is expressed in 100% of the human diffuse gliomas irrespective of grade and required for intracranial tumor formation in a genetically relevant model of malignant glioma (Ligon et al., 2004; Ligon et al., 2007). A developmentally regulated triple serine motif at positions 10, 13 and 14 in the amino terminus is well conserved across species ranging from humans to zebrafish and is essential for Olig2 proliferative function in both normal and malignant neural progenitors (Sun et al., 2011). All three serine residues must be mutated to achieve a strong loss-of-function or gain-of-function phenotype, suggesting that the phosphorylation state of Olig2 represents a significant conformational change in the amino
terminus (Sun et al., 2011).

Phospho-Ser10,13,14 Olig2 Antibody - References

Ligon KL, Alberta JA, Kho AT, Weiss J, Kwaan MR, Nutt CL, Louis DN, Stiles CD, Rowitch DH. The oligodendroglial lineage marker OLIG2 is universally expressed in diffuse gliomas. J Neuropathol Exp Neurol. 2004;63:499–509
Ligon KL, Huillard E, Mehta S, Kesari S, Liu H, Alberta JA, Bachoo RM, Kane M, Louis DN, Depinho RA,

Anderson DJ, Stiles CD, Rowitch DH. (2007) Olig2-regulated lineage-restricted pathway controls replication competence in neural stem cells and malignant glioma. Neuron. 2007;53:503–17.
Sun Y, Meijer DH, Alberta JA, Mehta S, Kane MF, Tien AC, Fu H, Petryniak MA, Potter GB, Liu Z, Powers JF, Runquist IS, Rowitch DH, Stiles CD. (2011) Phosphorylation state of Olig2 regulates proliferation of neural progenitors. Neuron 69(5):906-17