

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

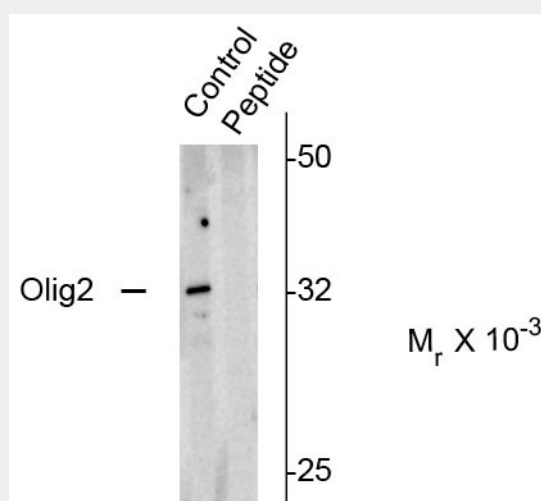
Blue Ice

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 Cytometry](#)
- [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