

PRODUCT INFORMATION



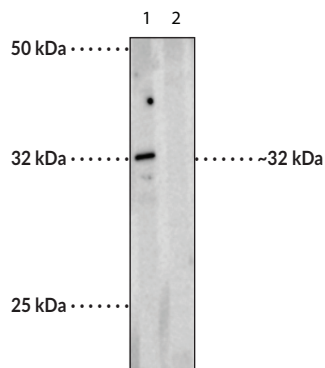
Olig2 (Phospho-Ser^{10,13,14}) Polyclonal Antibody

Item No. 29289

Overview and Properties

Contents:	This vial contains 100 µl of affinity-purified rabbit polyclonal antibody.
Synonyms:	Class B Basic Helix-Loop-Helix Protein 1, Class E Basic Helix-Loop-Helix Protein 19, Oligo2, Oligodendrocyte Lineage Transcription Factor 2, Oligodendrocyte-specific BHLH Transcription Factor 2
Immunogen:	Phosphopeptide corresponding to amino acid residues surrounding the phospho-Ser ^{10,13,14} of human Olig2
Molecular Weight:	~32 kDa
Species Reactivity:	(+) Human, mouse, rat
Form:	Liquid
Storage:	-20°C (as supplied)
Stability:	≥1 year
Storage Buffer:	10 mM HEPES, pH 7.5, with 150 mM sodium chloride, 100 µg BSA per ml, and 50% glycerol
Host:	Rabbit
Applications:	Western blot (WB); the recommended starting dilution is 1:1,000. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

Image



Lane 1: Olig2 protein phosphorylated at Ser^{10,13,14}
Lane 2: Phosphospecificity

WB of rat neonatal brain lysate showing specific immunolabeling of the ~32 kDa form of the Olig2 protein phosphorylated at Ser^{10,13,14} in the first lane (1). Phosphospecificity is shown in the second lane (2) where immunolabeling is blocked by the phosphopeptide used as the antigen but not by the corresponding non-phosphopeptide (not shown).

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM

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Description

Oligodendrocyte lineage transcription factor 2 (Olig2) is a basic helix-loop-helix transcription factor that is essential to the formation of oligodendrocytes and motor neurons in the spinal cord and somatic motor neurons in the hindbrain.¹ It represses differentiation and sustains the replication-competent state of uncommitted progenitor cells to expand the progenitor cell pool during early development and promotes the cell fate decision to form oligodendrocyte progenitors and motor neurons in the spinal cord during late development. It also suppresses the formation of astrocytes in the spinal cord. Olig2 contains a triple serine motif at positions 10, 13, and 14 near its amino terminus that is subject to phosphorylation.² Phosphorylation of Olig2 at this motif (phospho-Ser^{10,13,14}) is developmentally regulated and decreases as Olig2⁺ progenitor cells mature into terminally differentiated oligodendrocytes. EB5 neurospheres expressing a triple phosphomimetic mutant of Olig2 induce more rapid tumor formation and decreased survival in mice compared with neurospheres expressing wild-type Olig2. Cayman's Olig2 (Phospho-Ser^{10,13,14}) Polyclonal Antibody can be used for Western blot (WB) applications. The antibody recognizes Olig2 (phospho-Ser^{10,13,14}) at approximately 32 kDa from human, mouse, and rat samples.

References

1. Meijer, D.H., Kane, M.F., Mehta, S., *et al.* Separated at birth? The functional and molecular divergence of OLIG1 and OLIG2. *Nat. Rev. Neurosci.* **13**(12), 819-831 (2012).
2. Sun, Y., Meijer, D.H., Alberta, J.A., *et al.* Phosphorylation state of Olig2 regulates proliferation of neural progenitors. *Neuron* **69**(5), 906-917 (2011).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM