

# PRODUCT INFORMATION



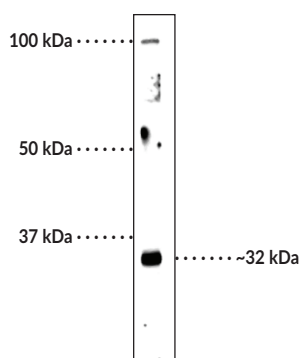
## Olig2 Polyclonal Antibody

Item No. 29288

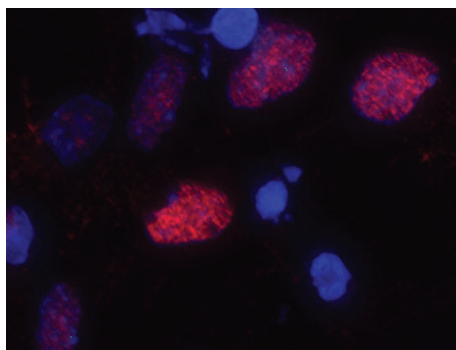
### Overview and Properties

<b>Contents:</b>	This vial contains 100 µl of protein A-purified polyclonal antibody.
<b>Synonyms:</b>	Class B Basic Helix-Loop-Helix Protein 1, Class E Basic Helix-Loop-Helix Protein 19, Oligodendrocyte Lineage Transcription Factor 2, Oligodendrocyte-specific BHLH Transcription Factor 2, Oligo2
<b>Immunogen:</b>	Recombinant mouse Olig2
<b>Molecular Weight:</b>	~32 kDa
<b>Species Reactivity:</b>	(+) Human, mouse, rat
<b>Form:</b>	Liquid
<b>Storage:</b>	-20°C (as supplied)
<b>Stability:</b>	≥1 year
<b>Storage Buffer:</b>	200 mM Tris, pH 8.0, with 100 mM glycine
<b>Host:</b>	Rabbit
<b>Applications:</b>	Immunocytochemistry (ICC), immunohistochemistry (IHC), immunoprecipitation (IP), and Western blot (WB); the recommended starting dilution for ICC is 1:1,000, 1:200-1,000 for IHC, 1:500-1:1,000 for IP, and 1:3,000 for WB. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

### Images



WB of neonatal rat brain lysate showing specific immunolabeling of the ~32 kDa Olig2 protein.



Immunostaining of primary rat cortical neuroepithelial cells with Olig2 Polyclonal Antibody (red, 1:1,000). The cells were treated with basic FGF for 30 hours prior to staining (this induces Olig2 expression in these primary cells).

**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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## Description

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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.<sup>1</sup> 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* overexpression enhances oligodendrocyte regeneration and myelin repair in a mouse model of lysophosphatidylcholine-induced demyelination.<sup>2</sup> Knockdown of *Olig2* in neurospheres prevents glioma formation but not neurosphere engraftment in mice.<sup>3</sup> Cayman's Olig2 Polyclonal Antibody can be used for immunocytochemistry (ICC) immunohistochemistry (IHC), immunoprecipitation (IP), and Western blot (WB) applications. The antibody recognizes Olig1 at approximately 32 kDa from human, mouse, and rat samples.

## References

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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. Wegener, A., Deboux, C., Bachelin, C., *et al.* Gain of Olig2 function in oligodendrocyte progenitors promotes remyelination. *Brain* **138**(Pt. 1), 120-135 (2015).
3. Ligon, K.L., Huillard, E., Mehta, S., *et al.* Olig2-regulated lineage-restricted pathway controls replication competence in neural stem cells and malignant glioma. *Neuron* **53**(4), 503-517 (2007).

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