PRODUCT INFORMATION

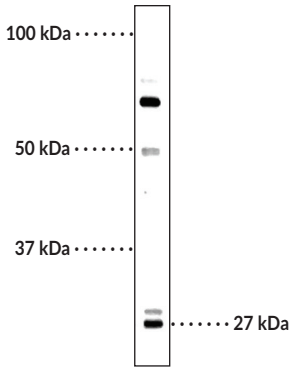
Olig1 Polyclonal Antibody

Item No. 29287

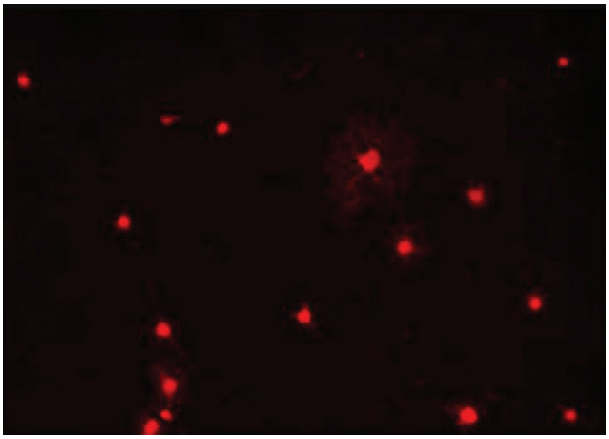
Overview and Properties

Contents:	This vial contains 100 µl of protein A-purified rabbit polyclonal antibody.
Synonyms:	Class B Basic Helix-Loop-Helix Protein 6, Class E Basic Helix-Loop-Helix Protein 2, Oligo1, Oligodendrocyte Lineage Transcription Factor 1
Immunogen:	Recombinant mouse Olig1
Molecular Weight:	~27 kDa
Species Reactivity:	(+) Human, mouse, rat
Form:	Liquid
Storage:	-80°C (as supplied)
Stability:	≥1 year
Storage Buffer:	200 mM Tris, pH 8.0, with 100 mM glycine
Host:	Rabbit
Applications:	Immunocytochemistry (ICC), immunohistochemistry (IHC), immunoprecipitation (IP), and Western blot (WB); the recommended starting dilution for ICC and IHC is 1:100, 1:50 and 1:3,000 for IP and WB, respectively. 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 ~27 kDa Olig1 protein.



Immunofluorescent labeling of primary rat oligodendrocytes labeled with Olig1 Polyclonal Antibody (red, 1:100).

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

Oligodendrocyte lineage transcription factor 1 (Olig1) is a basic helix-loop-helix transcription factor that promotes the formation and maturation of oligodendrocytes.[1] It is expressed in the spinal cord and neuroepithelium of the ventral forebrain, colocalizing with the oligodendrocyte precursor markers *Sox10* and *Pdgfra*. Olig1 is localized to the nucleus at the embryonic stage and is translocated to the cytoplasm after birth.[2] However, Olig1 is translocated back to the nucleus of oligodendrocyte precursors following a demyelinating injury. *Olig1*$^{-/-}$ mice exhibit delayed, but not impaired, spinal cord oligodendrocyte differentiation and maturation, indicating that Olig1 is non-essential to oligodendrocyte differentiation.[3] *Olig1* knockdown delays mean disease onset and reduces disease severity in a mouse model of myelin oligodendrocyte glycoprotein-induced experimental autoimmune encephalomyelitis.[4] Cayman's Olig1 Polyclonal Antibody can be used for immunocytochemistry (ICC), immunohistochemistry (IHC), immunoprecipitation (IP), and Western blot (WB) applications. The antibody recognizes Olig1 at approximately 27 kDa from human, mouse, and rat samples.

References

1. Zhou, Q., Wang, S., and Anderson, D.J. Identification of a novel family of oligodendrocyte lineage-specific basic helix-loop-helix transcription factors. *Neuron* **25(2)**, 331-343 (2000).
2. Cheng, T., Xue, X., and Fu, J. Effect of OLIG1 on the development of oligodendrocytes and myelination in a neonatal rat PVL model induced by hypoxia-ischemia. *Mol. Med. Rep.* **11(4)**, 2379-2386 (2015).
3. Paes de Faria, J., Kessaris, N., Andrew, P., *et al.* New *Olig1* null mice confirm a non-essential role for Olig1 in oligodendrocyte development. *BMC Neurosci.* **15**, 12 (2014).
4. Guo, X., Harada, C., Namekata, K., *et al.* Delayed onset of experimental autoimmune encephalomyelitis in Olig1 deficient mice. *PLoS One* **5(9)**, e13083 (2010).

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