Anti-Oligodendrocyte Marker O4-NL557

Catalog Number: NL1326R
Lot Number: AAYH04
100 Tests in 50 µL staining volume
20 Tests in 250 µL staining volume

Reagents Provided

NorthernLights™ 557 (NL557)-conjugated mouse monoclonal anti-Oligodendrocyte Marker O4: Supplied as a 10X solution of antibody in 0.5 mL PBS containing 0.09% sodium azide.

Clone #: O4

Isotype: mouse IgM

Storage

Reagents are stable for **twelve months** from the date of receipt when stored in the dark at 2° - 8° C.

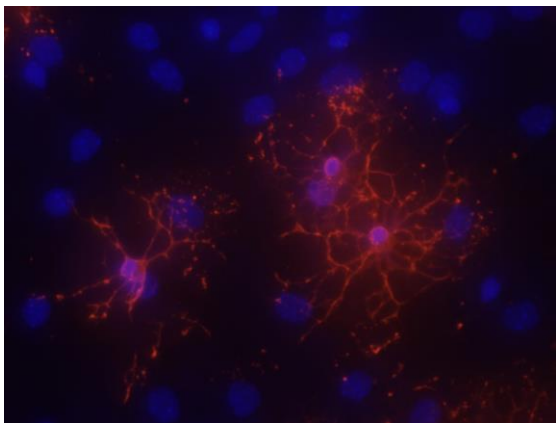
Intended Use

Designed to visualize the expression of Oligodendrocyte Marker O4 by fluorescence microscopy.

Product Description

This antibody was produced from a hybridoma resulting from the fusion of a mouse myeloma with B cells obtained from a mouse immunized with white matter of corpus callosum from bovine brain.[1] The IgM fraction of the tissue culture supernatant was purified by anti-IgM chromatography. The purified antibody was then conjugated to fluorochrome NL557. The spectral characteristics of NL557 are provided, along with those of Rhodamine Red™-X (RRX) and Cy™3 for comparison.

Fluorochrome	Absorption Maximum (nm)	Emission Maximum (nm)
NL557	557	574
RRX	570	590
Cy3	548	562



Oligodendrocyte Marker O4-NL557

7 day-differentiated rat cortical stem cells were stained with NL557-conjugated anti-Oligodendrocyte Marker O4 (Catalog # NL1326R, red) and counterstained with DAPI (blue).

Background Information

Oligodendrocytes are myelinating cells in the central nervous system (CNS) that form the myelin sheath of axons to support rapid nerve conduction. Oligodendrocyte Marker O4 is an antigen on the surface of oligodendrocyte progenitors.[2, 3] It has been commonly used as the earliest recognized marker specific for the oligodendroglial lineage.[4 - 9]

References

1. Sommer, I. & Schachner, M. (1981) Dev. Biol. **83**:311.
2. Schachner, M. *et al*. (1981) Dev. Biol. **83**:328.
3. Bansal, R. *et al*. (1989) J. Neurosci. Res. **24**:548.
4. Bansal, R. & Pfeiffer, S.E. (1989) Proc. Natl. Acad. Sci. USA **86**:6181.
5. Gard, A. *et al*. (1995) Dev. Biol. **167**:596.
6. Reynolds, R. & Hardy, R. (1997) J. Neurosci. Res. **47**:455.
7. Ono, K. *et al*. (1997) J. Neurosci. Res. **48**:212.
8. Pang, Y. *et al*. (2000) J. Neurosci. Res. **62**:510.
9. Cai, Z. *et al*. (2001) Brain Res. **898**:126.

Immunocytochemistry Validation

This antibody has been tested for immunocytochemistry using 7 day-differentiated rat cortical stem cells. Cells were fixed in PBS containing 4% paraformaldehyde, and blocked with PBS containing 10% normal donkey serum, 0.1% Triton® X-100, and 1% BSA. After blocking, cells were incubated with NL557-conjugated antibody at a final concentration of 1X (1:10 dilution) in blocking buffer for 3 hours in the dark. Between each step, cells were washed with PBS containing BSA. If a staining volume of 250 µL is used, this kit can be used for 20 tests; 100 tests can be done in a staining volume of 50 µL.

Warning: Contains sodium azide as a preservative - sodium azide may react with lead and copper plumbing to form explosive metal azides. Flush with large volumes of water during disposal.

FOR RESEARCH USE ONLY. NOT FOR USE IN HUMANS.

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