Mouse/Rat Nestin PE-conjugated Antibody

Monoclonal Mouse IgG_{2A} Clone # 307501

Catalog Number: IC2736P

100 TESTS

DESCRIPTION

Species Reactivity	Mouse/Rat
Specificity	Detects mouse and rat Nestin in Western blots.
Source	Monoclonal Mouse IgG_{2A} Clone # 307501
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	*E. coli*-derived recombinant rat Nestin Met544-Glu820 (Gly756Asp, Ile758Met, Arg572Lys, Ala574Pro, Ile802Met, Arg816Lys) Accession # EDM00749
Conjugate	Phycoerythrin Excitation Wavelength: 488 nm Emission Wavelength: 565-605 nm
Formulation	Supplied in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details. *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

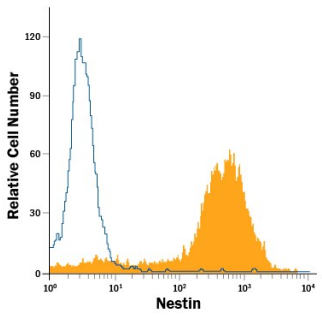
APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Intracellular Staining by Flow Cytometry	10 µL/10^6 cells	See Below

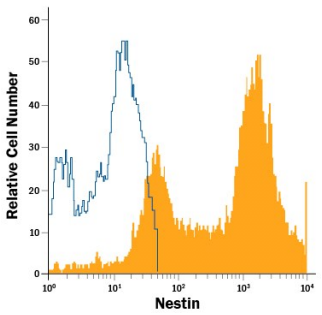
DATA

Intracellular Staining by Flow Cytometry



Detection of Nestin in Mouse Cortical Stem Cells by Flow Cytometry. Mouse cortical stem cells were stained with Mouse Anti-Mouse/Rat Nestin PE-conjugated Monoclonal Antibody (Catalog # IC2736P, filled histogram) or isotype control antibody (Catalog # IC003P, open histogram). To facilitate intracellular staining, cells were fixed with Flow Cytometry Fixation Buffer (Catalog # FC004) and permeabilized with Flow Cytometry Permeabilization/Wash Buffer I (Catalog # FC005). View our protocol for Staining Intracellular Molecules.

Intracellular Staining by Flow Cytometry



Detection of Nestin in Rat Cortical Stem Cells by Flow Cytometry. Rat cortical stem cells were stained with Mouse Anti-Mouse/Rat Nestin PE-conjugated Monoclonal Antibody (Catalog # IC2736P, filled histogram) or isotype control antibody (Catalog # IC003P, open histogram). To facilitate intracellular staining, cells were fixed with Flow Cytometry Fixation Buffer (Catalog # FC004) and permeabilized with Flow Cytometry Permeabilization/Wash Buffer I (Catalog # FC005). View our protocol for Staining Intracellular Molecules.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	**Protect from light. Do not freeze.** ● 12 months from date of receipt, 2 to 8 °C as supplied.

BACKGROUND

Nestin is a class VI intermediate filament protein (1,2) that is expressed in stem cells of the central nervous system (CNS) (3) but not in mature CNS cells.(4) Nestin expression is used extensively as a marker for CNS stem cells in the developing nervous system and *in vitro* cultured cells (5-10). Its transient expression is a critical step in the neural differentiation pathway.(2) Nestin is also expressed in non-neural stem cell populations, such as pancreatic islet progenitors (11-13) and hematopoietic progenitors (14). Over amino acids (aa) 544-820, rat Nestin shares 75% and 38% sequence identity with mouse and human Nestin, respectively.

References:

1. Hockfield, S. and R.D. McKay (1985) J. Neurosci. **5**:3310.
2. Lendahl, U. *et al.* (1990) Cell **60**:585.
3. Frederiksen, K. and R.D. McKay (1988) J. Neurosci. **8**:1144.
4. Tohyama, T. *et al.* (1992) Lab. Invest. **66**:303.
5. Uchida, N. *et al.* (2000) Proc. Natl. Acad. Sci. USA **97**:14720.
6. Frederiksen, K. *et al.* (1988) Neuron **1**:439.
7. Cattaneo, E. *et al.* (1990) Nature **347**:762.
8. Reynolds, B.A. and S. Weiss (1992) Science **255**:1707.
9. Rietze, R.L. *et al.* (2001) Nature **412**:736.
10. Carpenter, M.K. *et al.* (2001) Exp. Neurol. **172**:383.
11. Zulewski, H. *et al.* (2001) Diabetes **50**:521.
12. Lumelsky, N. *et al.* (2001) Science **292**:1389.
13. Lechner, A. *et al.* (2001) Biochem. Biophys. Res. Commun. **293**:670.
14. Shih, C.C. *et al.* (2001) Blood **98**:2412.

www.RnDSystems.com For research use only. Not for use in humans.
USA & CANADA Tel: (800) 343-7475 **EUROPE** Tel: +44 (0)1235 529449 **CHINA** Tel: +86 (21) 52380373