Mouse Neuropilin-1 PE-conjugated Antibody

Monoclonal Rat IgG_{2A} Clone # 761705

Catalog Number: FAB5994P

100 TESTS

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse Neuropilin-1 in direct ELISAs. In direct ELISAs, less than 5% cross-reactivity with recombinant rat (rr) Neuropilin-1 is observed and no cross-reactivity with recombinant human (rh) Neuropilin-1, rhNeuropilin-2, or rrNeuropilin-2 is observed.
Source	Monoclonal Rat IgG_{2A} Clone # 761705
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse Neuropilin-1 Phe21-Pro856 Accession # P97333
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.

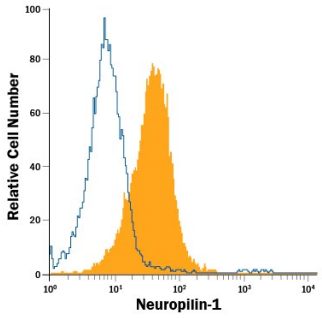
APPLICATIONS

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
Flow Cytometry	10 µL/10^6 cells	See Below

DATA

Flow Cytometry



Detection of Neuropilin-1 in bEnd.3 Mouse Cell Line by Flow Cytometry. bEnd.3 mouse endothelioma cell line was stained with Rat Anti-Mouse Neuropilin-1 PE-conjugated Monoclonal Antibody (Catalog # FAB5994P, filled histogram) or isotype control antibody (Catalog # IC006P, open histogram). View our protocol for Staining Membrane-associated Proteins.

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

Neuropilin-1 (Nrp-1, previously neuropilin; also CD304) is a 130 - 140 kDa type I transmembrane (TM) glycoprotein that regulates axon guidance and angiogenesis. The full-length 923 amino acid (aa) mouse Nrp-1 contains a 623 aa extracellular domain (ECD) that shares 98% aa identity with rat and 93% aa identity with human, equine, bovine and canine Nrp-1. The ECD contains two N-terminal CUB domains (termed a1a2), two domains with homology to coagulation factors V and VIII (b1b2) and a MAM (meprin) domain (c). At least one splice variant that diverges at aa 587 and lacks the TM domain has been sequenced. This form is potentially a soluble antagonist, based on results from human Nrp-1 splice variants. The sema domains of Class III secreted semaphorins such as Sema3A bind Nrp-1 a1a2. Heparin, the heparin-binding forms of VEGF ($VEGF_{165}$, VEGF-B and VEGF-E), P*l*GF (P*l*GF2), plus the C-terminus of Sema3 bind the b1b2 region of Nrp-1. Nrp-1 and Nrp-2 share 48% aa identity within the ECD and can form homo- and hetero-oligomers via interaction of their MAM domains. Neuropilins show partially overlapping expression in neuronal and endothelial cells during development. Both neuropilins act as co-receptors with plexins, including plexins A1, A4, B1, and D1, to bind class III semaphorins, such as Sema 3A, 3C, 3D, 3E, and 3F, that often mediate axon repulsion. Both Nrp-1 and Nrp-2 serve as co-receptors with VEGF R2 (also called KDR or Flk-1) for $VEGF_{165}$ binding. Sema3A signaling can be blocked by $VEGF_{165}$, which has higher affinity for Npn-1. Nrp-1 is preferentially expressed in developing or remodeling arteries. Nrp-1 is also expressed on dendritic cells and mediates DC-induced T cell proliferation.

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