

**Neuropilin-1 Antibody**  
**Purified Mouse Monoclonal Antibody**  
**Catalog # AO2083a****Specification****Neuropilin-1 Antibody - Product Information**

Application	E, FC, WB
Primary Accession	<a href="#">O14786</a>
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Isotype	IgG1
Calculated MW	103.1kDa KDa

**Description**

This gene encodes one of two neuropilins, which contain specific protein domains which allow them to participate in several different types of signaling pathways that control cell migration. Neuropilins contain a large N-terminal extracellular domain, made up of complement-binding, coagulation factor V/VIII, and meprin domains. These proteins also contains a short membrane-spanning domain and a small cytoplasmic domain. Neuropilins bind many ligands and various types of co-receptors; they affect cell survival, migration, and attraction. Some of the ligands and co-receptors bound by neuropilins are vascular endothelial growth factor (VEGF) and semaphorin family members. Several alternatively spliced transcript variants that encode different protein isoforms have been described for this gene.

**Immunogen**

Synthesized peptide of human Neuropilin-1 (AA: 45-59).

**Formulation**

Purified antibody in PBS with 0.05% sodium azide

**Neuropilin-1 Antibody - Additional Information**

**Gene ID** 8829

**Other Names**

Neuropilin-1, Vascular endothelial cell growth factor 165 receptor, CD304, NRP1, NRP, VEGF165R

**Dilution**

E~~1/10000

FC~~1/200 - 1/400

WB~~1/500 - 1/2000

**Storage**

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

**Precautions**

Neuropilin-1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

## Neuropilin-1 Antibody - Protein Information

**Name** NRP1 ([HGNC:8004](#))

**Synonyms** NRP, VEGF165R

### Function

Cell-surface receptor involved in the development of the cardiovascular system, in angiogenesis, in the formation of certain neuronal circuits and in organogenesis outside the nervous system. Mediates the chemorepulsant activity of semaphorins (PubMed:<a href="http://www.uniprot.org/citations/10688880" target="\_blank">10688880</a>, PubMed:<a href="http://www.uniprot.org/citations/9288753" target="\_blank">9288753</a>, PubMed:<a href="http://www.uniprot.org/citations/9529250" target="\_blank">9529250</a>). Recognizes a C-end rule (CendR) motif R/KXXR/K on its ligands which causes cellular internalization and vascular leakage (PubMed:<a href="http://www.uniprot.org/citations/19805273" target="\_blank">19805273</a>). It binds to semaphorin 3A, the PLGF-2 isoform of PGF, the VEGF165 isoform of VEGFA and VEGFB (PubMed:<a href="http://www.uniprot.org/citations/10688880" target="\_blank">10688880</a>, PubMed:<a href="http://www.uniprot.org/citations/19805273" target="\_blank">19805273</a>, PubMed:<a href="http://www.uniprot.org/citations/9288753" target="\_blank">9288753</a>, PubMed:<a href="http://www.uniprot.org/citations/9529250" target="\_blank">9529250</a>). Coexpression with KDR results in increased VEGF165 binding to KDR as well as increased chemotaxis. Regulates VEGF-induced angiogenesis. Binding to VEGFA initiates a signaling pathway needed for motor neuron axon guidance and cell body migration, including for the caudal migration of facial motor neurons from rhombomere 4 to rhombomere 6 during embryonic development (By similarity). Regulates mitochondrial iron transport via interaction with ABCB8/MITOSUR (PubMed:<a href="http://www.uniprot.org/citations/30623799" target="\_blank">30623799</a>).

### Cellular Location

[Isoform 2]: Secreted

### Tissue Location

[Isoform 1]: The expression of isoforms 1 and 2 does not seem to overlap. Expressed in olfactory epithelium (at protein level) (PubMed:33082293). Expressed in fibroblasts (at protein level) (PubMed:36213313). Expressed by the blood vessels of different tissues In the developing embryo it is found predominantly in the nervous system. In adult tissues, it is highly expressed in heart and placenta; moderately in lung, liver, skeletal muscle, kidney and pancreas; and low in adult brain (PubMed:10688880, PubMed:9529250). Expressed in the central nervous system, including olfactory related regions such as the olfactory tubercles and paraolfactory gyri (PubMed:33082293)

## Neuropilin-1 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

