Recombinant Mouse Neuropilin-1/NRP1/VEGF165R /CD304 Protein

Catalog No.: RP01869

Sequence Information

Species	Gene ID
Mouse	18186
Swiss Prot	**Tags**
P97333	C-His

Synonyms

BDCA4; BDCA-4; CD304 antigen; CD304; DKFZp686A03134; DKFZp781F1414; neuropilin 1; Neuropilin1; Neuropilin-1; NP1; NRP; NRP1; transmembrane receptor; Vascular endothelial cell growth factor 165 receptor; VEGF165R

Product Information

Source	Purification
HEK293 cells	≥ 90% as determined by SDS-PAGE.
Calculated MW	**Observed MW**
94.51 kDa	120-140 kDa

Endotoxin

< 0.1 EU/μg of the protein by LAL method.

Formulation

Lyophilized from a 0.22 μm filtered solution of PBS, pH 7.4.

Reconstitution

Centrifuge the vial before opening. Reconstitute to a concentration of 0.1-0.5 mg/mL in sterile distilled water. Avoid vortex or vigorously pipetting the protein. For long term storage, it is recommended to add a carrier protein or stablizer (e.g. 0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose), and aliquot the reconstituted protein solution to minimize free-thaw cycles.

Background

Neuropilin-1 (Npn-1, previously neuropilin; also CD304 or BDCA4 in humans) is a 130-140 kDa type I transmembrane (TM) glycoprotein that regulates axon guidance and angiogenesis. The full-length 923 amino acid (aa) mouse Npn-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 Npn-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 Npn-1 splice variants . The sema domains of Class III secreted semaphorins such as Sema3A bind Npn-1 a1a2 . Heparin, the heparin-binding forms of VEGF (VEGF165, VEGF-B and VEGF-E), PlGF (PlGF2), and the C-terminus of Sema3 bind the b1b2 region . Npn-1 and Npn-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, mainly plexin A3 and A4, to bind class III semaphorins that mediate axon repulsion . However, only Npn-1 binds Sema3A, and only Npn-2 binds Sema3F . Both are co-receptors with VEGF R2 (also called KDR or Flk-1) for VEGF165 binding . Sema3A signaling can be blocked by VEGF165, which has higher affinity for Npn-1 . Npn-1 is preferentially expressed in developing or remodeling arteries . Npn-1 is also expressed on dendritic cells and mediates DC-induced T cell proliferation .

Basic Information

Description

Recombinant Mouse Neuropilin-1/NRP1/VEGF165R/CD304 Protein is produced by HEK293 cells expression system. The target protein is expressed with sequence (Phe22-Pro856) of Mouse Neuropilin-1/NRP1/VEGF165R /CD304(Accession #NP_032763.2) fused with a His tag at the C-terminus.

Activity

Shipping

Lyophilized proteins are shipped at ambient temperature.
Liquid proteins are shipped at frozen temperature with dry ice.
Upon receipt, store it immediately at the temperature recommended below.

Storage

Store at -20℃

Operational Notes

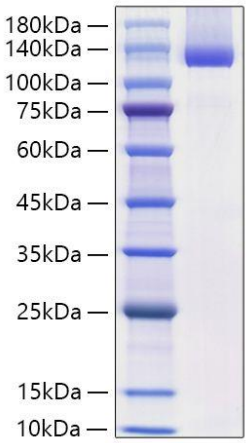
For your safety and health, please wear a lab coat and disposable gloves for handling.

Contact

400-999-6126
cn.market@abclonal.com.cn
www.abclonal.com.cn

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Validation Data



Recombinant Mouse Neuropilin-1/NRP1/VEGF165R/CD304 Protein was determined by SDS-PAGE under reducing conditions with Coomassie Blue.