

Neuropilin-1 Protein, Cynomolgus (592a.a, HEK293, His)

Cat. No.:	HY-P70185
Synonyms:	rCynNeuropilin-1, His; CD304; NRP1; NRPNP1; VEGF165R; BDCA4; Neuropilin-1
Species:	Cynomolgus
Source:	HEK293
Accession:	G7PEQ1 (F22-G613)
Gene ID:	102145235
Molecular Weight:	80-100 kDa

PROPERTIES

AA Sequence

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FRNDKCGDTI   KIESPGYLT S   PGYPHSYHPS   EKCEWLIQAP
DPYQRIMINF   NPHFDLEDRD   CKYDYVEVFD   GENENGR LWG
KFCGKIAPPP   VVSSGQFLFI   KFVSDYETHG   AGFSIRYEIF
KRGPECSQNY   TTPSGVIKSP   GFPEKYPNSL   ECTYIVFAPK
MSEIILEFES   FDLEPDSNPP   GGMFCRYDRL   EIWDGFPDVG
PHIGRYCGQK   TPGRIRSSSG   ILSMVFYTDS   AIAKEGFSAN
YSVLQSSVSE   DFKCMEAVGM   ESGEIHSDQI   TASSQYSTNW
SAERSRLNYP   ENGWTPEGEDS  YREWIQVDLG   LLRFVTA VGT
QGAISKETKK   KYYVKTYKID   ISSNGEDWIT   IKEGNKPVLF
QGNTNPTDVV   VAVFPKPLIT   RFVRIK PATW  ETGISLRFEV
YGCKITDYPC   SGMLGMV SGL  ISDSQITSSN   QGDRNWMPEN
IRLVTSRSGW   ALPPAPHSYV   NEWLQIDLGE   EKIVRGI I IQ
GGKHRENKVF   MRKFKIGYSN   NGSDWK MIMD  DSKRKA KSF E
GNNNYDTP EL  RTFPALSTRF   IRIYPERATH   GGLGLR MELL
GCEVEAPT AG  PTTPNGNPVD   ECDD DQANCH  SG
  
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Appearance Lyophilized powder.

Formulation Lyophilized from a 0.2 µm filtered solution of PBS, pH 7.4.

Endotoxin Level <1 EU/µg, determined by LAL method.

Reconstitution It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH₂O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).

Storage & Stability Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.

Shipping Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background

Neuropilin-1 (NRP1) protein is a transmembrane glycoprotein. In mice, NRP1 is selectively expressed on thymic-derived Tregs, and enhances immunosuppressive function. In humans, NRP1 is mainly expressed on plasmacytoid dendritic cells (pDCs) where it aids in priming immune responses, as well as on a subset of T regulatory cells (Tregs) isolated from secondary lymph nodes^[1].

Neuropilin-1 transduce signals for VEGFs, together with VEGFR family members. Neuropilin-1 interacts with VEGF and semaphorins, and can promote the growth, survival, and self-renewal of tumors. For example, Neuropilin-1 can complex with VEGFR2 in vascular endothelial cells to induce vessel permeability and angiogenesis^[3].

Neuropilin-1 also acts as an entry factor and potentiate SARS-CoV-2 infectivity. Besides, Neuropilin-1 is an entry receptor for Epstein-Barr virus (EBV) infection of nasopharyngeal epithelial cells, and enhances EBV infection^{[2][3]}. NRP-1 plays a central role in axonal guidance and pruning by interaction with Semaphorin-3A (a protein seen widely in both the nervous system and the vasculature)^[3].

Furthermore, Neuropilin-1 acts as a co-receptor for TGF- β , and enhances TGF- β activity via the SMAD2/3 signaling pathway. Neuropilin-1 can activate the inactive latent form (LAP-TGF- β), and also promote immune suppression^[1].

Neuropilin-1 plays an important role in angiogenesis, neuronal development, and the regulation of immune responses.

Caution: Product has not been fully validated for medical applications. For research use only.

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