APA692Hu61 100μg
Active Neuropilin 1 (NRP1)
Organism Species: *Homo sapiens* (Human)
Instruction manual

FOR RESEARCH USE ONLY
NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

13th Edition (Revised in Aug, 2023)

[PROPERTIES]

Source: Eukaryotic expression.
Host: 293F cell
Residues: Cys27~Asp444
Tags: N-terminal His-tag
Purity: >95%
Endotoxin Level: <1.0EU per 1μg (determined by the LAL method).
Buffer Formulation: PBS, pH7.4, containing 5% Trehalose .
Original Concentration: 200μg/mL
Applications: Cell culture; Activity Assays.
(May be suitable for use in other assays to be determined by the end user.)
Predicted isoelectric point: 4.9
Predicted Molecular Mass: 48.6kDa
Accurate Molecular Mass: 60kDa as determined by SDS-PAGE reducing conditions.
Phenomenon explanation:
The possible reasons that the actual band size differs from the predicted are as follows:

1. Splice variants: Alternative splicing may create different sized proteins from the same gene.
2. Relative charge: The composition of amino acids may affects the charge of the protein.
3. Post-translational modification: Phosphorylation, glycosylation, methylation etc.
4. Post-translation cleavage: Many proteins are synthesized as pro-proteins, and then cleaved to give the active form.
5. Polymerization of the target protein: Dimerization, multimerization etc.

[USAGE]

Reconstitute in 10mM PBS (pH7.4) to a concentration of 0.1-1.0 mg/mL. Do not vortex.

[STORAGE AND STABILITY]

Storage: Avoid repeated freeze/thaw cycles.
Store at 2-8°C for one month.
Aliquot and store at -80°C for 12 months.

Stability Test: The thermal stability is described by the loss rate. The loss rate was determined by accelerated thermal degradation test, that is, incubate the protein at 37°C for 48h, and no obvious degradation and precipitation were observed. The loss rate is less than 5% within the expiration date under appropriate storage condition.

[SEQUENCE]

CGDT IKIESPGYLT SPGYPHSYHP
SEKCEWLIQA PDPYQRIMIN FNPHFDLEDR DCKYDYVEVF DGENENGHFR
GKFCGKIAPP PVVSSGPFLF IKFVSDYETH GAGFSIRYEI FKRGPECSQN
YTTPSGVIKS PGFPEKYPNS LECTYIVFVP KMSEIILEFE SFDLEPDSNP
PGGMFCRYDR LEIWDGFPDV GPHIGRYCGQ KTPGRIRSSS GILSMVFYTD
SAIAKEGFSA NYSVLQSSVS EDFKCMEALG MESGEIHSDQ ITASSQYSTN
WSAERSRLNY PENGWTPGED SYREWIQVDL GLLRFVTAVG TQGAISKETK
KKYYVKTYKI DVSSNGEDWI TIKEGNKPVL FQGNTNPTDV VVAVFPKPLI
TRFVRIKPAT WETGISMRFE VYGCKITDYP CSGMLGMVSG LISD

[ACTIVITY]

Neuropilin 1 (NRP1), as kown as CD304 or VEGF165R, is a 130 - 140 kDa type I transmembrane (TM) glycoprotein. NRP1 is expressed by neurons, blood vessels, immune cells and many other cell types in the mammalian body and binds a range of structurally and functionally diverse extracellular ligands to modulate organ development and function. VEGF165, an angiogenic cytokine, has higher affinity for NRP1. A functional binding ELISA assay was conducted to detect the interaction of recombinant human NRP1 and recombinant human VEGF165. Briefly, NRP1 was diluted serially in PBS with 0.01% BSA (pH 7.4). Duplicate samples of 100 μl were then transferred to VEGF165-coated microtiter wells and incubated for 1h at 37℃. Wells were washed with PBST and incubated for 1h with

anti-NRP1 pAb, then aspirated and washed 3 times. After incubation with HRP labelled secondary antibody for 1h at 37℃, wells were aspirated and washed 5 times. With the addition of substrate solution, wells were incubated 15-25 minutes at 37℃. Finally, add 50 μL stop solution to the wells and read at 450/630 nm immediately. The binding activity of recombinant human NRP1 and recombinant human VEGF165 was shown in Figure 1, the EC50 for this effect is 3.6 ug/mL.

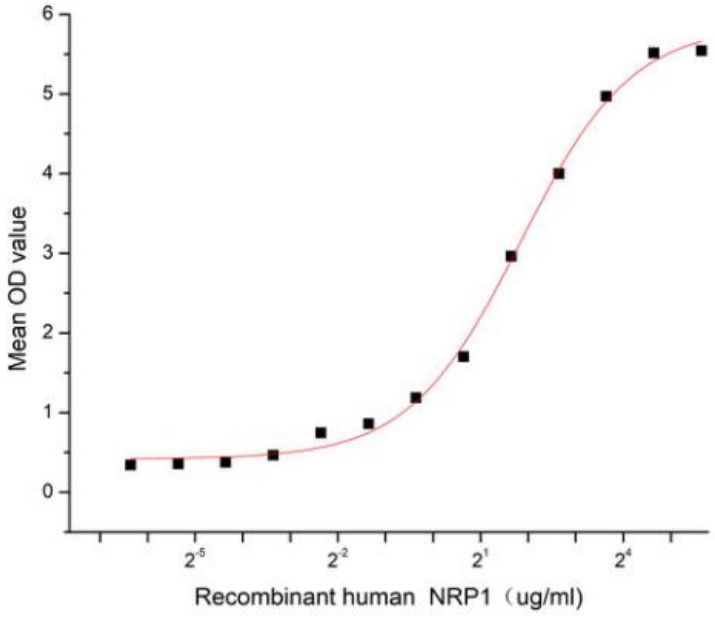

Figure 1. The binding activity of recombinant human NRP1 and recombinant human VEGF165

[IDENTIFICATION]

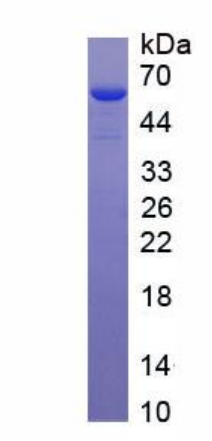

Figure 2. SDS-PAGE

Sample: Active recombinant NRP1, Human

[IMPORTANT NOTE]

The kit is designed for research use only, we will not be responsible for any issue if the kit was used in clinical diagnostic or any other procedures.