APB696Hu61 100μg
Active Vascular Endothelial Growth Factor 165 (VEGF165)
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: Glu179~Arg371
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: Activity Assays.
(May be suitable for use in other assays to be determined by the end user.)
Predicted isoelectric point: 7.6
Predicted Molecular Mass: 23.4kDa
Accurate Molecular Mass: 20&22kDa 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]

ETMNFLLSWVHWSLALLLYLHHAKWSQAAPMAEGGGQNHHEVVKFMDVYQRSYCHPIETLV
DIFQEYPDEIEYIFKPSCVPLMRCGGCCNDEGLECVPTEESNITMQIMRIKPHQGQHIGEMSFLQ
HNKCECRPKKDRARQENPCGPCSERRKHLFVQDPQTCKCSCKNTDSRCKARQLELNERTCRCD
KPRR

[ACTIVITY]

VEGF165, the predominant and most biologically active isoform of vascular endothelial growth factor, is a potent pro - angiogenic glycoprotein critical for endothelial cell proliferation, migration, survival, and vascular permeability. It is widely expressed in various tissues and plays essential roles in physiological processes such as embryonic development, tissue repair, and endometrial remodeling.Under pathological conditions, dysregulated VEGF165 overexpression drives abnormal angiogenesis in tumors, diabetic retinopathy, rheumatoid arthritis, and other neovascular diseases, making it a central therapeutic target in anti - angiogenic therapy. VEGF165 specifically binds to VEGFR2 on endothelial cell surfaces, inducing receptor dimerization and downstream signaling activation. Briefly, VEGFR2 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-VEGFR2 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 450/630nm immediately. Measured by its binding ability in a functional ELISA. When recombinant human VEGF165 is Immobilized at 2 μg/mL(100 μL well), the concentration of VEGFR2 that produces 50% optimal bindingresponse is found to be approximately 0.266 μg/mL.

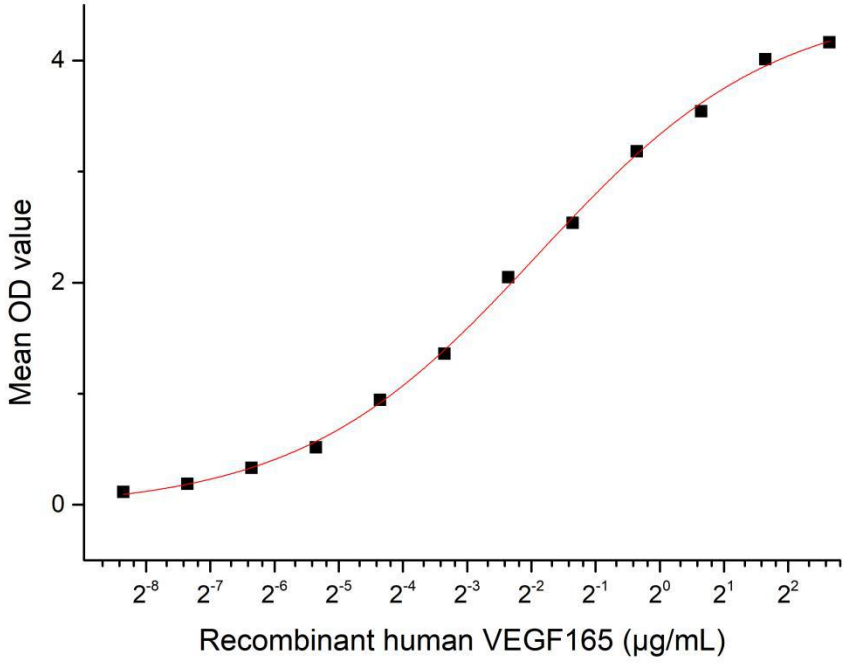

Figure 1. The binding activity of recombinant human VEGF165 and human VEGFR2

[IDENTIFICATION]

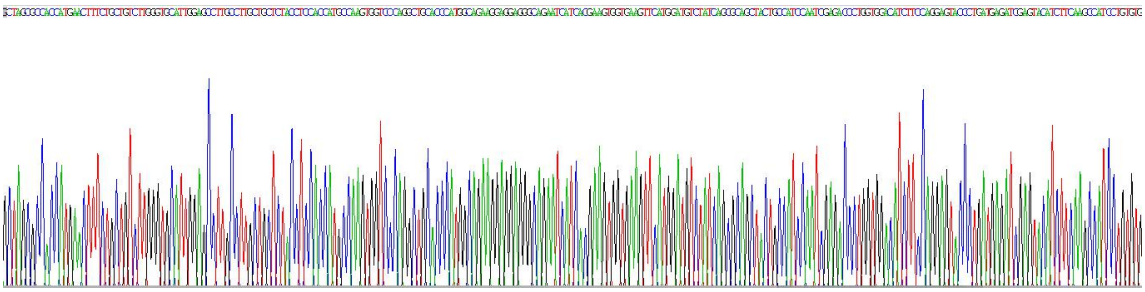

Figure 2. Gene Sequencing (extract)

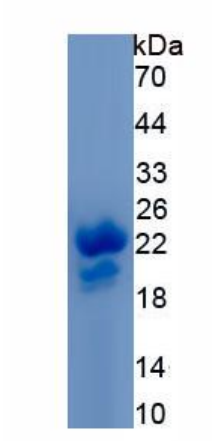

Figure 3. SDS-PAGE

Sample: Active recombinant VEGF165, 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.