Recombinant Human VEGFR-2/KDR/CD309 Protein

Catalog No.: RP01378

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Sequence Information

Species
Human

Gene ID
3791

Swiss Prot
P35968

Tags
C-hFc&His

Synonyms
CD309,FLK1,VEGFR,VEGFR2,VEGF Receptor 2,KDR

Product Information

Source
HEK293 cells

Purification
≥ 95 % as determined by SDS-PAGE.

Calculated MW
110.06 kDa

Observed MW
160-170 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

Kinase insert domain receptor (KDR) is also known as CD309, FLK1, VEGFR, VEGFR2, and is one of the subtypes of VEGFR. VEGF receptors are receptors for vascular endothelial growth factor (VEGF). VEGFR2 was shown to be the primary signal transducer for angiogenesis and the development of pathological conditions such as cancer and diabetic retinopathy. It has been shown that VEGFR2 is expressed mainly in the endothelial cells, and the expression is upregulated in the tumor vasculature. Thus the inhibition of VEGFR2 activity and its downstream signaling are important targets for the treatment of diseases involving angiogenesis. VEGFR2 transduces the major signals for angiogenesis via its strong tyrosine kinase activity. However, unlike other representative tyrosine kinase receptors, VEGFR2 does not use the Ras pathway as major downstream signaling but rather uses the phospholipase C-protein kinase C pathway to signal mitogen-activated protein (MAP)-kinase activation and DNA synthesis. VEGFR2 is a direct and major signal transducer for pathological angiogenesis, including cancer and diabetic retinopathy, in cooperation with many other signaling partners; thus, VEGFR2 and its downstream signaling appear to be critical targets for the suppression of these diseases. VEGF and VEGFR2-mediated survival signaling are critical to endothelial cell survival, maintenance of the vasculature and alveolar structure, and regeneration of lung tissue. Reduced VEGF and VEGFR2 expression in emphysematous lungs has been linked to increased endothelial cell death and vascular regression.

Basic Information

Description
Recombinant Human VEGFR-2/KDR/CD309 Protein is produced by HEK293 cells expression system. The target protein is expressed with sequence (Ala20-Glu764) of human VEGFR2/KDR (Accession #NP_002244.1) fused with a hFc, 6×His tag at the C-terminus.

Activity
1.Measured by its binding ability in a functional ELISA. Immobilized Human VEGF121 at 2 μg/mL (100 μL/well) can bind Human KDR with a linear range of 0.2-22.5 ng/mL.
2.Measured by its binding ability in a functional ELISA. Immobilized Human VEGF165 at 2 μg/mL (100 μL/well) can bind Human KDR with a linear range of 0.2-38.3 ng/mL.

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℃

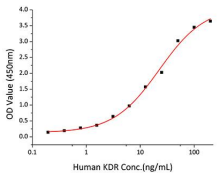
Operational Notes
For your safety and health, please wear a lab coat and disposable gloves for handling.

Contact

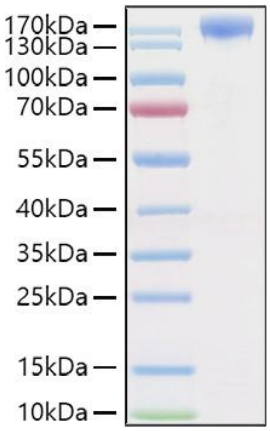
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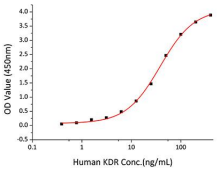
Validation Data



Immobilized Recombinant Human VEGF121 at 2 μg/mL (100 μL/well) can bind Human KDR with a linear range of 0.2-22.5 ng/mL.



Recombinant Human VEGFR-2/KDR/CD309 Protein was determined by SDS-PAGE under reducing conditions with Coomassie Blue.



Immobilized Recombinant Human VEGF165 at 2 μg/mL (100 μL/well) can bind Human KDR with a linear range of 0.2-38.3 ng/mL.