Data Sheet (Cat.No.TMPJ-00593)

TargetMol

VEGFR2/KDR Protein, Human, Recombinant (aa 20-764, His)

General Information

Synonyms:	KDR;Fetal liver kinase 1;VEGFR-2;Kinase insert domain receptor;Vascular endothelial growth factor receptor 2;FLK-1;Protein-tyrosine kinase receptor flk-1
Protein Construction:	Ala20-Glu764
Species:	Human
Expression Host:	HEK293 Cells
Accession:	AAI31823.1
Molecular Weight:	110-140 KDa (reducing condition)
AA Sequence:	Ala20-Glu764

QC Testing

Biological Activity:	1. Loaded Anti-Human VEGFR2 mAb-Fc on Protein A Biosensor, can bind Human VEGFR2-His with an affinity constant of 32.85 pM as determined in BLI assay. (Regularly tested) 2. Immobilized Human VEGFR2-His at 1μg/ml (100 μl/well)can bind Anti-Human VEGFR2 mAb. The ED50 of Anti-Human VEGFR2 mAb is 36.55 ng/ml. (Regularly tested)
Purity:	Greater than 95% as determined by reducing SDS-PAGE. (QC verified)
Endotoxin:	< 0.1 ng/μg (1 EU/μg) as determined by LAL test.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS, pH 7.4.

Preparation and Storage

Reconstitution:

Reconstitute the lyophilized protein in distilled water. The product concentration should not be less than 100 μg/ml. Before opening, centrifuge the tube to collect powder at the bottom. After adding the reconstitution buffer, avoid vortexing or pipetting for mixing.

Stability & Storage:

Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

Human Vascular endothelial growth factor receptor 2(KDR, VEGFR-2) is a member of the class III subfamily of receptor tyrosine kinases (RTKs). KDR is involved in a number of fundamental biological processes such as the regulation of angiogenesis, vascular development, vascular permeability, and embryonic hematopoiesis. It also

plays an essential role in promoting proliferation, survival, migration and differentiation of endothelial cells, reorganization of the actin cytoskeleton. VEGFR2 is identified as the receptor for VEGF and VEGFC and an early marker for endothelial cell progenitors, whose expression is restricted to endothelial cells in vivo.The adaptor protein SHB has been shown to interact with VEGFR2 in receptor tyrosine kinase signaling. In addition, VEGFR2 is able to interact with HIV-1 extracellular Tat protein upon VEGF activation, and seems to enhance angiogenesis in Kaposi's sarcoma lesions. VEGF R2 is thought to be the primary inducer of VEGF-mediated blood vessel growth, while VEGF R3 plays a significant role in VEGF-C and VEGF-D-mediated lymphangiogenesis.

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