

**Synonym**

KDR,CD309,FLK1,VEGFR,VEGFR2

**Source**

Mouse VEGF R2 Protein, Mouse IgG2a Fc Tag(VE2-M5258) is expressed from human 293 cells (HEK293). It contains AA Ala 20 - Glu 762 (Accession # [P35918-1](#) ).

Predicted N-terminus: Ala 20

**Molecular Characterization**

|                                       |                                 |
|---------------------------------------|---------------------------------|
| VEGF R2(Ala 20 - Glu 762)<br>P35918-1 | mFc(Glu 98 - Lys 330)<br>P01863 |
|---------------------------------------|---------------------------------|

This protein carries a mouse IgG2a Fc tag at the C-terminus

The protein has a calculated MW of 110.1 kDa. The protein migrates as 120-135 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.

**Endotoxin**

Less than 0.1 EU per µg by the LAL method.

**Purity**

>95% as determined by SDS-PAGE.

**Formulation**

Lyophilized from 0.22 µm filtered solution in 50 mM Tris, 100 mM Glycine, pH7.5 with trehalose as protectant.

Contact us for customized product form or formulation.

**Reconstitution**

Please see Certificate of Analysis for specific instructions.

*For best performance, we strongly recommend you to follow the reconstitution protocol provided in the CoA.*

**Storage**

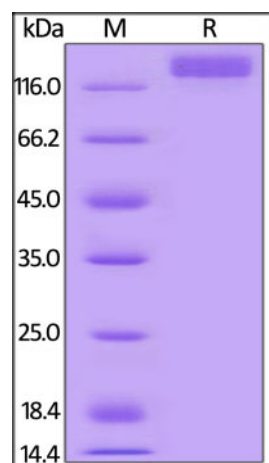
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

*Please avoid repeated freeze-thaw cycles.*

This product is stable after storage at:

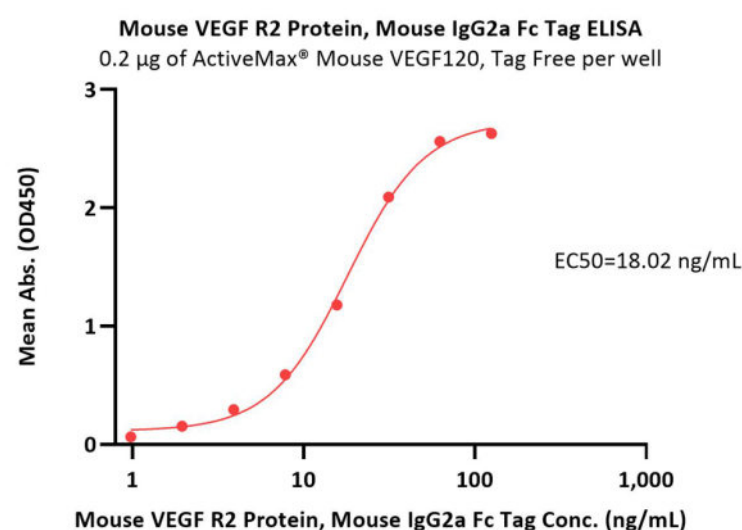
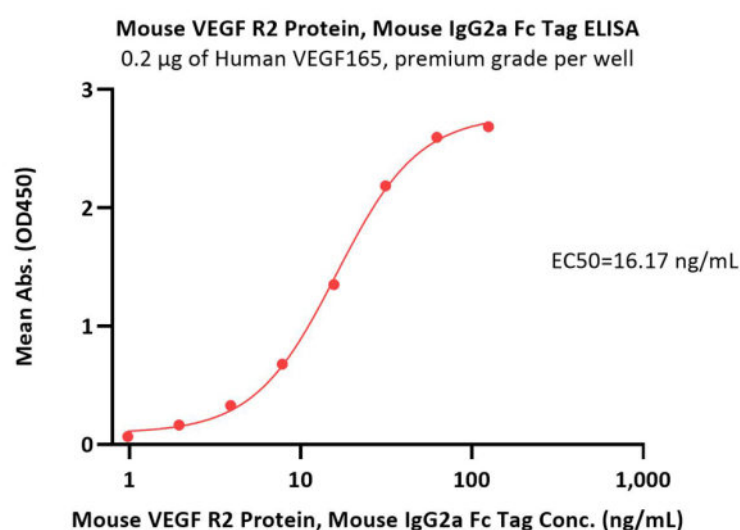
- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

**SDS-PAGE**



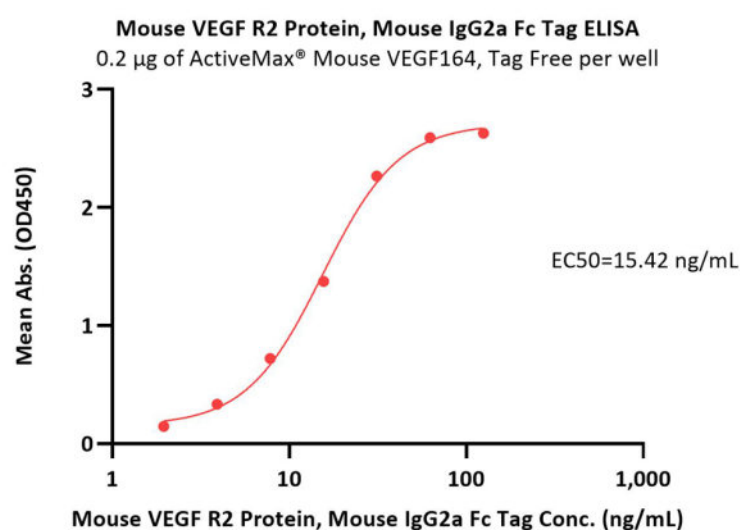
Mouse VEGF R2 Protein, Mouse IgG2a Fc Tag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 95%.

**Bioactivity-ELISA**



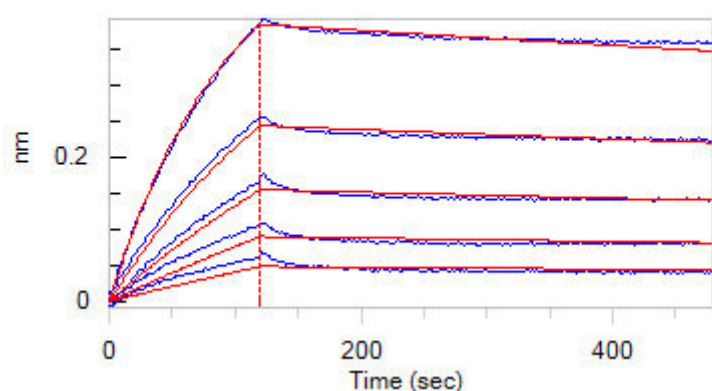
Immobilized Human VEGF165, premium grade (Cat. No. VE5-H4210) at 2 µg/mL (100 µL/well) can bind Mouse VEGF R2 Protein, Mouse IgG2a Fc Tag (Cat. No. VE2-M5258) with a linear range of 1-31 ng/mL (QC tested).

Immobilized ActiveMax® Mouse VEGF120, Tag Free (Cat. No. VE0-M4211) at 2 µg/mL (100 µL/well) can bind Mouse VEGF R2 Protein, Mouse IgG2a Fc Tag (Cat. No. VE2-M5258) with a linear range of 1-31 ng/mL (Routinely tested).



Immobilized ActiveMax® Mouse VEGF164, Tag Free (Cat. No. VE4-M4216) at 2 µg/mL (100 µL/well) can bind Mouse VEGF R2 Protein, Mouse IgG2a Fc Tag (Cat. No. VE2-M5258) with a linear range of 2-31 ng/mL (Routinely tested).

**Bioactivity-BLI**



Loaded Biotinylated Mouse VEGF164, His,Avitag (Cat. No. VE4-M82Q3) on SA Biosensor, can bind Mouse VEGF R2 Protein, Mouse IgG2a Fc Tag (Cat. No. VE2-M5258) with an affinity constant of 1.33 nM as determined in BLI assay (ForteBio Octet Red96e) (Routinely tested).

## 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). There are three main subtypes of VEGFR, numbered 1, 2 and 3. The VEGF receptors have an extracellular portion consisting of 7 immunoglobulin-like domains, a single transmembrane spanning region and an intracellular portion containing a split tyrosine-kinase domain. VEGF-A binds to VEGFR-1 (Flt-1) and VEGFR-2 (KDR/Flk-1). VEGFR-2 appears to mediate almost all of the known cellular responses to VEGF. The function of VEGFR-1 is less well defined, although it is thought to modulate VEGFR-2 signaling. Another function of VEGFR-1 may be to act as a dummy/decoy receptor, sequestering VEGF from VEGFR-2 binding (this appears to be particularly important during vasculogenesis in the embryo). 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.

## Clinical and Translational Updates

Please contact us via [TechSupport@acrobiosystems.com](mailto:TechSupport@acrobiosystems.com) if you have any question on this product.