

**Synonym**

KDR,CD309,FLK1,VEGFR,VEGFR2

**Source**

PE-Labeled Human VEGF R2, His Tag (KDR-HP227) is produced via site-specific conjugation of PE to Human VEGF R2, His Tag under optimal conditions with a proprietary technology. Human VEGF R2, His Tag is expressed from human 293 cells (HEK293). It contains AA Ala 20 - Glu 764 (Accession # [AAI31823.1](#)).

Predicted N-terminus: Ala 20

**Molecular Characterization**

VEGF R2(Ala 20 - Glu 764) AAI31823.1	Poly-his
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This protein carries a polyhistidine tag at the C-terminus.

The protein has a calculated MW of 85.9 kDa.

**Application**

Please note that this product is NOT compatible to streptavidin detection system.

**Conjugate**

PE

Excitation Wavelength: 488 nm / 561 nm

Emission Wavelength: 575 nm

**Formulation**Lyophilized from 0.22  $\mu$ m filtered solution in PBS, 0.5% BSA, pH7.4. Normally trehalose is added as protectant before lyophilization.

Contact us for customized product form or formulation.

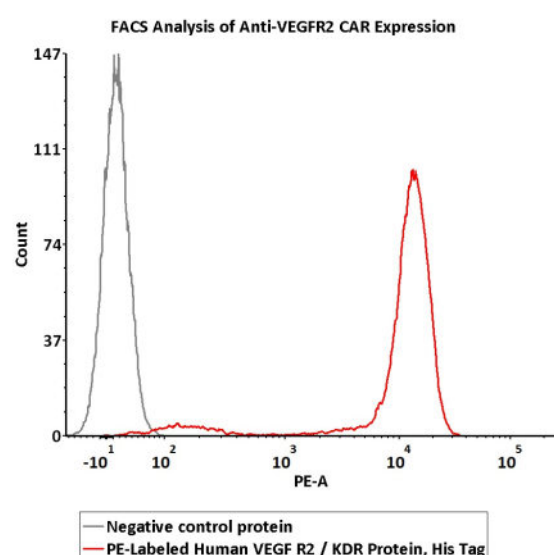
**Reconstitution**

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  $-20^{\circ}\text{C}$  or lower.*Please protect from light and avoid repeated freeze-thaw cycles.*

This product is stable after storage at:

- $-20^{\circ}\text{C}$  to  $-70^{\circ}\text{C}$  for 12 months in lyophilized state;
- $-70^{\circ}\text{C}$  for 3 months under sterile conditions after reconstitution.

**Bioactivity-FACS**

5e5 of anti-VEGFR2 CAR-293 cells were stained with 100  $\mu$ L of 1:25 dilution (4  $\mu$ L stock solution in 100  $\mu$ L FACS buffer) of PE-Labeled Human VEGF R2, His Tag (Cat. No. KDR-HP227) and negative control protein respectively. PE signal was used to evaluate the binding activity (QC 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.