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Recombinant Human Vascular Endothelial Growth Factor A (VEGF)

Catalog No.	Size	Species	Protein Accession No.
230-00012	10, 50, 100 µg	Human	NP_001165097

Synonyms

Vascular endothelial growth factor, VEGF, vascular endothelial growth factor A, VEGF-A, VPF, vascular permeability factor.

Description

Vascular endothelial growth factor (VEGF) is a member of the PDGF/VEGF growth factor family, produced by cells that stimulate the growth of new blood vessels. VEGF family includes VEGF-A, B, C, and D isoforms. VEGF-A was called VEGF before other isoforms were discovered. VEGF plays an important role in creating new blood vessels, inducing angiogenesis, vasculogenesis and endothelial cell growth, inhibiting apoptosis, mediating increased vascular permeability, promoting cell migration, etc. VEGF members stimulate cellular responses through binding to tyrosine kinase receptors (VEGFRs) on the cell surface.

Preparation

The human *VEGF* (**Ala27-Arg191**) gene without signal peptide coding sequence was cloned and expressed in *Escherichia coli*. The recombinant protein has an *N*-terminal 6×histidine tag and was purified by immobilized metal ion affinity chromatography (IMAC).

Source

Recombinant histidine-tagged protein, purified from *E. coli*.

Predicted Molecular Mass

~21 kDa with the 6×histidine tag.

Formulation

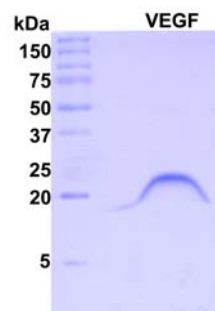
Recombinant VEGF is lyophilized from a 0.2 µm filtered solution in 10 mM acetic acid, pH 5.0.

Stability & Storage

- Lyophilized product is stable at room temperature for 3 weeks, it is recommended to be stored desiccated below -20°C in a manual defrost freezer.
- Reconstitution:** briefly spin the vial prior to opening to bring the contents to the bottom. Recombinant VEGF is acid-stable. It is recommended to reconstitute the lyophilized product with 0.1% trifluoroacetic (TFA) or 4 mM HCl to a concentration of 0.1-0.5 mg/mL.
- Upon reconstituted, the protein should be stored at 4°C for one week. For long term storage, it is recommended to add a carrier protein (0.1% HSA or BSA) and store at -20 or -80°C. **Please avoid repeated freeze-thaw cycles.**

Purity

>95%, determined by SDS-PAGE and stained with Coomassie blue.



References

- Holmes K, et al. (2007) Vascular endothelial growth factor receptor-2: structure, function, intracellular signaling and therapeutic inhibition. *Cell Signal.* **19** (10): 2003–2012.
- Bergers G, Hanahan D (2008). Modes of resistance to anti-angiogenic therapy. *Nat. Rev. Cancer* **8** (8): 592–603.
- Rosenfeld PJ, et al. (2006). Ranibizumab for neovascular age-related macular degeneration. *New Engl J Med.* **355** (14): 1419–1431.

**The products are furnished for LABORATORY RESEARCH USE ONLY.
Not for diagnostic or therapeutic use.**