

Datasheet for ABIN2666576
VEGFA Protein (AA 27-190)



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Overview

Quantity:	25 µg
Target:	VEGFA
Protein Characteristics:	AA 27-190
Origin:	Rat
Source:	HEK-293 Cells
Protein Type:	Recombinant
Biological Activity:	Active
Application:	Flow Cytometry (FACS)

Product Details

Purity:	> 95 % , as determined by Coomassie stained SDS-PAGE.
Sterility:	0.22 µm filtered
Endotoxin Level:	Less than 0.01 ng per µg cytokine as determined by the LAL method.

Target Details

Target:	VEGFA
Alternative Name:	VEGF-164 (VEGFA Products)
Background:	The VEGF family includes VEGF-A, VEGF-B, VEGF-C, VEGF-D, and placental growth factor (PIGF). VEGF-A is generated as multiple isoforms by alternative splicing. These isoforms are generically identified as VEGFxxx where xxx refers to the number of amino acids. Rat isoforms include VEGF-120, VEGF-164, and VEGF-188. The VEGF gene is highly conserved among

Target Details

human, dog, cow, mouse, rat, pig, and chicken. VEGF164 plays a critical role in new blood vessel formation in vivo. VEGF164 induces angiogenesis on different levels. It acts as mitogen especially on endothelial cells, raises the vessel permeability and dilatation by releasing NO, and has chemotactic impact on monocytes/macrophages which plays a crucial role in inducing inflammatory neovascularization. Angiogenic activities of VEGFs are mediated primarily through the two receptors VEGFR-1 and VEGFR-2. VEGFR-2 signaling is enhanced by interactions with co-receptors such as heparin/heparan sulfate and Neuropilin 1. VEGF induces osteoclast migration and activation. In addition, it supports the survival of mature osteoclasts. These processes play a key role in repairing and remodeling during bone development.

Molecular Weight: The 164 amino acid recombinant protein has a predicted molecular mass of approximately 19.2 kDa. The protein migrates approximately at 25 kDa in DTT-reducing conditions and at approximately 50 kDa in non-reducing conditions by SDS-PAGE. The predicted N-te

Pathways: [RTK Signaling](#), [Glycosaminoglycan Metabolic Process](#), [Regulation of Cell Size](#), [Tube Formation](#), [Signaling Events mediated by VEGFR1 and VEGFR2](#), [Platelet-derived growth Factor Receptor Signaling](#), [VEGFR1 Specific Signals](#), [VEGF Signaling](#)

Application Details

Application Notes: Optimal working dilution should be determined by the investigator.

Comment: Biological activity: ED50 = 0.6 - 3.6 ng/mL, corresponding to a specific activity of 0.27 - 1.67 x 10⁶ units/mg, as determined by induction of HUVEC cell proliferation in a dose-dependent manner.

Restrictions: For Research Use only

Handling

Format: Liquid

Reconstitution: For maximum results, quick spin vial prior to opening. The protein can be aliquoted and stored at -20 °C to -70 °C. Stock solutions can also be prepared at 50 - 100 µg/mL in sterile buffer (PBS, HPBS, DPBS, or EBSS) containing carrier protein such as 0.2 - 1 % BSA or HSA and stored in working aliquots at -20 °C to -70 °C.

Buffer: 0.22 µm filtered protein solution is in 5 mM citric acid, 5 mM NaHPO₄, 0.15 M NaCl, pH 4.0.

Handling Advice: Avoid repeated freeze/thaw cycles.

Storage: -20 °C

Handling

Storage Comment: Unopened vial can be stored between 2°C and 8°C for one month, at -20°C for six months, or at -70°C for one year.