

Recombinant Rat VEGFA Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP52287

Size: 10ug, 100ug

Protein Name: Vascular endothelial growth factor A (VEGF-A) (Vascular permeability factor) (VPF)

Synonym: Vegfa, Vegf

UniProt ID: P16612

UniProt Link: www.uniprot.org/uniprotkb/P16612/entry

Species Source: Rat

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 214 AA

Molecular Weight: 25 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MNFLLSVHWHTLALLLYLHHAKWSQAAPTTEGEQKAHEVVKFMDVYQRSYCRPIETLVDIFQEYPD
EIEYIFKPSCVPLMRCAGCCNDEALECVPTSESNVTM QIMRIKPHQSQHIGEMSFLQHRSRCECRPKK
DRTKPEKKSVRGKGKGQKRKRKKS RFKSWSVHCEPCSERRKHLFVQDPQTCKCCKNTDSRCKA
RQLELNERTCRCDKPRR

3. Buffer Composition

Liquid format: PBS-based buffer containing 50% glycerol. Glycerol concentration can be customized upon customer request; please state special requirements when placing your order.

Lyophilized format: Buffer before lyophilization is PBS supplemented with 6% trehalose.

4. Storage Conditions

Upon receipt, store the product at -20 °C or -80 °C. Aliquot the product for on-demand use to preserve protein activity and prevent denaturation and inactivation caused by repeated freeze-thaw cycles.

5. Product Description

This product is recombinant Vascular endothelial growth factor A (VEGF-A) (Vascular permeability factor) (VPF) produced using the HEK293T eukaryotic cell expression system. It is suitable for in-vitro functional assays, protein-protein interaction studies, antibody preparation and other biomedical research applications.

Protein Function: Growth factor active in angiogenesis, vasculogenesis and endothelial cell growth. Induces endothelial cell proliferation, promotes cell migration, inhibits apoptosis and induces permeabilization of blood vessels. Binds to the FLT1/VEGFR1 and KDR/VEGFR2 receptors, heparan sulfate and heparin. May play a role in increasing vascular permeability during lactation, when increased transport of molecules from the blood is required for efficient milk protein synthesis. Binding to NRP1 receptor initiates a signaling pathway needed for motor neuron axon guidance and cell body migration, including for the caudal migration of facial motor neurons from rhombomere 4 to rhombomere 6 during embryonic development (By similarity). Also binds the DEAR/FBXW7-AS1 receptor (By similarity).

Subcellular Localization: Secreted . Note=VEGF-A120 is acidic and freely secreted. VEGF-A164 is more basic, has heparin-binding properties and, although a significant proportion remains cell-associated, most is freely secreted. VEGF-A188 is very basic, it is cell-associated after secretion and is bound avidly by heparin and the extracellular matrix, although it may be released as a soluble form by heparin, heparinase or plasmin (By similarity).

6. Notes

- Avoid repeated freeze-thaw cycles to maintain protein stability and biological activity.
- Please specify special buffer-composition requirements at the time of order placement.
- For research use only. Not intended for clinical diagnosis, therapeutic use or commercial manufacturing.