

VEGF164, Rat (*P. pastoris*-expressed)

Cat. No.: Z02917-1

Size: 1.0 mg

Synonyms: Vascular Endothelial Growth Factor 164 (VEGF-164), VEGF, Vascular Permeability Factor (VPF)

Description:

Vascular Endothelial Growth Factor A164 (VEGF-A164), a member of the cysteine knot growth factor^[1], is one of major isoforms of VEGF-As. VEGF-As are endothelial cell-specific mitogens with angiogenic and vascular permeability-inducing properties^[2]. During maturation, rat VEGF-A is alternatively spliced to generate rVEGF-A120, rVEGF-A164 and rVEGF-A188^[3] which correspond to hVEGF-A121, hVEGF-A165 and hVEGF-A189 in human, respectively (the numbers designate the amino acid residues). The active form of rVEGF-A164 is either a homodimeric or heterodimeric polypeptides which bind to the transmembrane tyrosine kinases receptors FLT1, FLK1 or KDR^[4] or to the non-tyrosine kinase neuropilin receptors NRP1/2^[5].

Recombinant rat Vascular Endothelial Growth Factor A164 (rrVEGF-A164) produced in *P. pastoris* is a disulfide-linked homodimer containing two polypeptide chains of 165 amino acids each. A fully biologically active molecule, rrVEGF-A164 has a molecular mass of 38 kDa analyzed by non-reducing SDS-PAGE and is obtained by chromatographic techniques at GenScript.

Amino Acid Sequence:

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00001 MAPTTEGEQK AHEVVKFMVDV YQRSYCRPIE TLVDIFQEYP
00041 DEIEYIFKPS CVPLMRCAGC CNDEALECVP TSESNTMQLI
00081 MRIKPHQSQH IGEMSFQHS RCECRPKKDR TKPENHCEPC
00121 SERRKHLFVQ DPQTCKCCK NTDSCRCKARQ LELNERTCRC
00161 DKPRR
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Source: *P. pastoris*

Species: Rat

Biological Activity: ED₅₀<4 ng/ml, measured by cell proliferation assay of HUVEC.

Molecular Weight: 38 kDa, observed by non-reducing SDS-PAGE.

Formulation: Lyophilized after extensive dialysis against PBS.

Reconstitution: Reconstituted in ddH₂O or PBS at 100 µg/ml.

Purity: > 95% as analyzed by reducing SDS-PAGE.

Endotoxin Level: <1 EU/µg, determined by LAL method.

Storage: Lyophilized recombinant rat Vascular Endothelial Growth Factor A164(rrVEGF-A164) remains stable up to 6 months at lower than -70°C from date of receipt. Upon reconstitution, rrVEGF-A164 should be stable up to 1 week at 4°C or up to 2 months at -20°C.