

## **Recombinant Rat VEGF 164**

Catalog No: PMK2208

Known As: Vascular endothelial growth factor A; Vascular permeability factor; VEGF; VEGF-A; VPF

## **PROPERTIES**

| Description        | Recombinant Rat Vascular Endothelial Growth Factor A is produced by our Yeast expression system and the target gene encoding Ala27-Arg190(Ala36Thr) is expressed.   |
|--------------------|---|
| Accession          | P16612-2  |
| Formulation        | Lyophilized from a 0.2 µm filtered solution of PBS, pH 7.4.   |
| Size               | 10μg/50μg/500μg/1mg   |
| Purity             | > 95%   |
| Endotoxin          | < 0.1 EU/μg as determined by LAL test.  |
| Predicted Mol Mass | 19.2 KDa  |
| Apparent Mol Mass  | 18-23 KDa, reducing conditions  |
| Reconstitution     | Always centrifuge tubes before opening.Do not mix by vortex or pipetting. It is not recommended to reconstitute to a concentration less than 100µg/ml. Dissolve the lyophilized protein in distilled water. Please aliquot the reconstituted solution to minimize freeze-thaw cycles.   |
| Shipping           | The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature listed below.  |
| Storage            | Lyophilized protein should be stored at $\leq$ -20°C, stable for one year after receipt. Reconstituted protein solution can be stored at 2-8°C for 2-7 days. Aliquots of reconstituted samples are stable at $\leq$ -20°C for 3 months.   |
| Background         | Vascular endothelial growth factor (VEGF/VEGF-A) is originally known as vascular permeability factor (VPF). It belongs to the PDGF family with a cysteine-knot structure comprised of eight conserved cysteine residues, and reckoned as a potent mediator in the process of angiogenesis and vasculogenesis in either fetus or adult. VEGF is particularly expressed in supraoptic, paraventricular nuclei and the choroid plexus of the pituitary, and abundant in the corpus luteum of the ovary and in kidney glomeruli. The rat VEGF protein contains a putative 20 amino acids (aa) signal peptide, and alternative splicing of rat VEGF gene produces isoforms of 120, 144, 164 and 188 aa. Rat VEGF164 respectively displays 97% and 88% aa identity with that regions of mouse and human VEGF. VEGF can bind to the FLT1/VEGFR1 and KDR/VEGFR2 receptors, heparan sulfate and heparin, and play important roles in inducing endothelial cell proliferation, promoting cell migration, inhibiting apoptosis and inducing permeabilization of blood vessels. |

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