

DESCRIPTION

Source Mouse myeloma cell line, NS0-derived
Ala20-Phe105, with a C-terminal 6-His tag
Accession # P58294

N-terminal Sequence Analysis Ala20

Predicted Molecular Mass 10.5 kDa

SPECIFICATIONS

Activity Measured in a cell proliferation assay using EJV bovine adrenal-derived endothelial cells.
The ED₅₀ for this effect is 1-4 µg/mL.

Measured in a cell proliferation assay using human pancreatic cancer cells.
The ED₅₀ for this effect is 1-4 µg/mL.

Endotoxin Level <0.10 EU per 1 µg of the protein by the LAL method.

Purity >97%, by SDS-PAGE under reducing conditions and visualized by silver stain.

Formulation Lyophilized from a 0.2 µm filtered solution in PBS. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution Reconstitute at 100 µg/mL in sterile PBS.

Shipping The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.

Stability & Storage Use a manual defrost freezer and avoid repeated freeze-thaw cycles.

- 12 months from date of receipt, -20 to -70 °C as supplied.
- 1 month, 2 to 8 °C under sterile conditions after reconstitution.
- 3 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

Endocrine gland-derived vascular endothelial growth factor (EG-VEGF), also called prokineticin 1 (PK1), is a member of the prokineticin family of secreted proteins that share a common structural motif containing ten conserved cysteine residues that form five pairs of disulfide bonds (1, 2). Members of this family include the mammalian EG-VEGF/PK1 and PK2, as well as the venom protein A (VPRA) from the venom of black mamba snake and the frog *Bombina variegata*, Bv8 (1). Human EG-VEGF precursor is a 105 amino acid (aa) residue protein with a 19 aa signal peptide that is cleaved to yield a 86 aa mature protein (1, 2). EG-VEGF is expressed in multiple tissues including the gastrointestinal (GI) tract and steroidogenic glands (testis, ovary, placenta and adrenal glands). EG-VEGF has been shown to potently stimulate the contraction of GI smooth muscle. In addition, EG-VEGF is a tissue-specific angiogenic factor that exhibits biological activities similar to that of VEGF on select cells. It induces the proliferation, migration, and fenestration in cultured endocrine gland-derived capillary endothelial cells. EG-VEGF binds to and activates two closely related G protein-coupled receptors, EG-VEGF/PK1-R1 and EG-VEGF/PK2-R2 (3, 4). Activation of the receptors leads to stimulation of phosphoinositide turnover and activation of p44/p42 MAP kinase signaling pathways.

References:

1. Li, M. *et al.* (2001) *Mol. Pharmacol.* **59**:692.
2. LeCouter, J. *et al.* (2001) *Nature* **412**:877.
3. Lin, D. *et al.* (2002) *J. Biol. Chem.* **277**:19276.
4. Masuda, Y. *et al.* (2002) *Biochem. Biophys. Res. Commun.* **293**:396.