

Rev07  
Update: Aug,11,2025**DATASHEET**

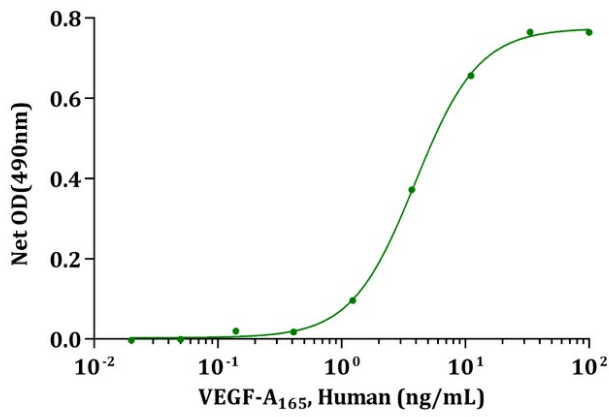
# VEGF165, Human

Cat. No.: Z02689

## Product Introduction

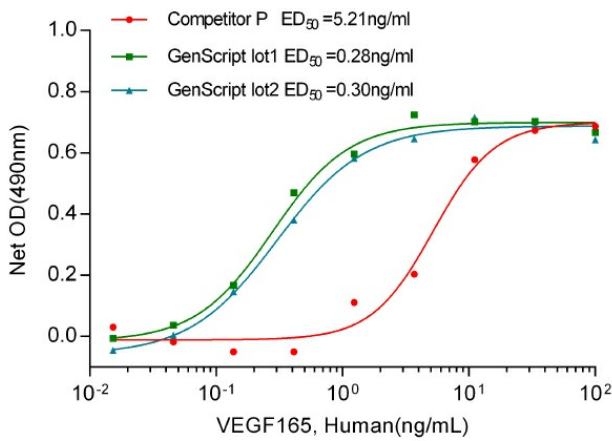
<b>Species</b>	Human
<b>Protein Construction</b>	<b>VEGF165 (Ala27-Arg191) Accession # P15692-4</b>
<b>Purity</b>	> 95% as analyzed by SDS-PAGE
<b>Endotoxin Level</b>	< 0.5 EU/μg of protein by gel clotting method
<b>Biological Activity</b>	ED <sub>50</sub> of 1.0-5.0 ng/ml, measured by the dose-dependent stimulation of the proliferation of HUVEC cells, corresponding to a specific activity of $2.0 \times 10^5$ - $1.0 \times 10^6$ units/mg.
<b>Expression System</b>	P. pastoris
<b>Apparent Molecular Weight</b>	~ 38-40 kDa, on SDS-PAGE under non-reducing conditions ~ 18-20 kDa, on SDS-PAGE under reducing conditions Structure/form: Disulfide-linked homodimer
<b>Formulation</b>	Lyophilized after extensive dialysis against 25 mM HEPES, 150 mM NaCl, pH 7.0.
<b>Reconstitution</b>	It is recommended that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute the lyophilized powder in ddH <sub>2</sub> O up to 100 μg/ml.
<b>Storage &amp; Stability</b>	Upon receiving, this product remains stable for up to 6 months at lower than -70°C. Upon reconstitution, the product should be stable for up to 1 week at 4°C or up to 3 months at -20°C. For long term storage it is recommended that a carrier protein (example 0.1% BSA) be added. Avoid repeated freeze-thaw cycles.

## Examples

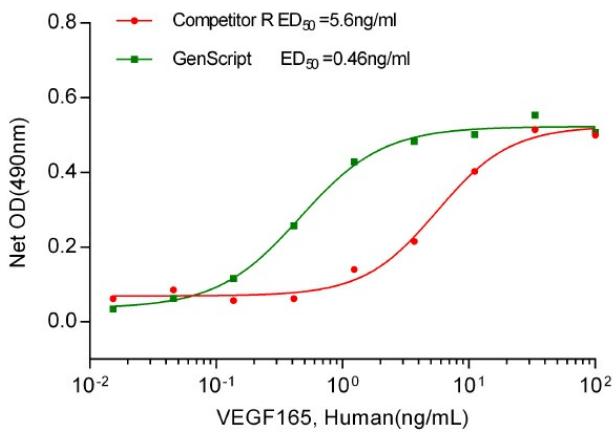


### Biological Activity

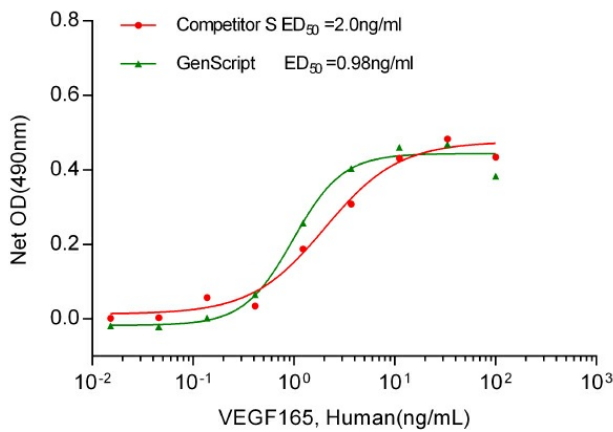
VEGF-A165, Human (Cat. No. Z02689) stimulates cell proliferation of HUVEC cells. The ED<sub>50</sub> for this effect is typically 1-5 ng/mL.



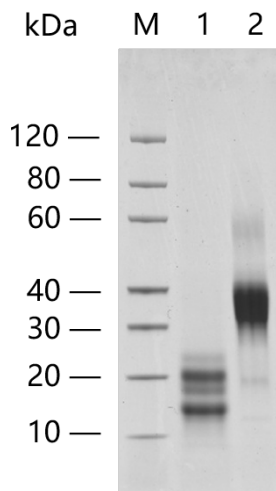
GenScript product showed better activity compared to competitor P



GenScript product showed better activity compared to competitor R



GenScript product showed better activity compared to competitor S



Recombinant VEGF165, Human (Z02689) was resolved by SDS-PAGE stained with coomassie blue, under reducing (R) and non-reducing (N) conditions, showing major bands at ~ 18-20 kDa and ~ 38-40 kDa, respectively. Multiple bands or smear in the gel are caused by glycosylation.

Lane 1: 2 µg of Z02689, reducing (R)

Lane 2: 2 µg of Z02689, non-reducing (N)

> 95% as analyzed by SDS-PAGE

## Background

**Target Background :** Vascular Endothelial Growth Factor (VEGF) is a potent growth and angiogenic cytokine. It stimulates proliferation and survival of endothelial cells, and promotes angiogenesis and vascular permeability. Expressed in vascularized tissues, Vascular Endothelial Growth Factor (VEGF) plays a prominent role in normal and pathological angiogenesis. Substantial evidence implicates Vascular Endothelial Growth Factor (VEGF) in the induction of tumor metastasis and intra-ocular neovascular syndromes. Vascular Endothelial Growth Factor (VEGF) signals through the three receptors; fms-like tyrosine kinase (flt-1), KDR gene product (the murine homolog of KDR is the flk-1 gene product) and the flt4 gene product.

**Synonyms :** VEGF-165; Vascular Endothelial Growth Factor 165; VPF; Folliculostellate cell-derived growth factor; Glioma-derived endothelial cell mitogen; Vascular Permeability Factor

**For laboratory research use only. Direct human use, including taking orally and injection and clinical use are forbidden.**

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