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#5211

Mouse Vascular Endothelial Growth Factor-164 (mVEGF₁₆₄)

10 µg

For Research Use Only. Not for Use in Diagnostic Procedures.

MW (kDa):	UniProt ID:	Entrez-Gene Id:
24-31	#Q00731	22339

Background

VEGF₁₆₄ is one of many splice variants of the mouse VEGF-A gene, and is one amino acid shorter than its human counterpart, VEGF₁₆₅ (1,2). VEGF₁₆₄ is produced by a number of cells including endothelial cells, macrophages and T cells (1,2). VEGF₁₆₄ is involved in angiogenesis, vascular endothelial cell survival, growth, migration and vascular permeability (1,2). Gene expression is induced by hypoxia, inflammatory cytokines and oncogenes (1,2). VEGF₁₆₄ binds to heparan sulfate and is retained on the cell surface and in the extracellular matrix (1-3). VEGFR1 and VEGFR2 are the receptor tyrosine kinases for VEGF₁₆₄ (2). NRP-1 and NRP-2 may function as co-receptors and enhance VEGFR2 signaling (2-3). Binding of VEGF₁₆₄ to VEGFR1 and VEGFR2 leads to activation of the PI3K/AKT, p38 MAPK, FAK and Paxillin (2).

Endotoxin

Less than 0.01 ng endotoxin/1µg mVEGF₁₆₄.

Purity

>98% as determined by SDS-PAGE of 6 µg reduced (+) and non-reduced (-) recombinant mVEGF₁₆₄. All lots are greater than 98% pure.

Source / Purification

Recombinant mouse VEGF₁₆₄ (mVEGF₁₆₄) Ala205-Arg368 (Accession #NP_033531) was expressed in human 293 cells at Cell Signaling Technology.

Bioactivity

The bioactivity of recombinant mVEGF₁₆₄ was determined in a cell proliferation assay using HUVEC. The ED₅₀ of each lot is between 1-5 ng/ml.

Background References

- Haigh, J.J. (2008) *Organogenesis* 4, 247-56.
- Takahashi, H. and Shibuya, M. (2005) *Clin Sci (Lond)* 109, 227-41.
- Neufeld, G. et al. (1999) *FASEB J* 13, 9-22.

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