

Technical Data Sheet

Recombinant human VEGF 165 protein



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Lot Specific Information

Lot Number: Lot Specific*

Total Protein: Lot Specific*

*This information will be noted on the certificate of analysis that ships with this product.

Shelf Life

This product has a guaranteed shelf-life of one year from the date of customer receipt when stored as recommended.

Product Website Link: <https://bioxcell.com/recombinant-human-vegf-165-protein-rp013>

Product Information

Catalog Number:	RP013
Protein Identity:	Confirmed identity with expected mass, determined by mass spectrometry
Formulation:	Lyophilized, white powder
Endotoxin:	≤0.5 EU/mg, LAL assay
Purity:	≥95%; SDS-PAGE
Reconstitution:	Resuspend in sterile-filtered water at >50 µg/ml. Once reconstituted, store in single-use aliquots to avoid freeze-thaw cycles. Store reconstituted protein at -20 °C to -80 °C for a maximum of 12 months or until the expiry date if sooner.
Sterility:	Sterile
Production:	Microbial. Expressed in E. coli
Molecular Weight:	38.3 kDa (dimer), 19 kDa (monomer)
Bioactivity Assay:	No significant difference between EC50 of reference and test lots
Mycoplasma:	Negative

Description

Recombinant human VEGF 165 protein (vascular endothelial growth factor, VEGF165/VEGF165a) is the most abundant VEGF isoform, a 165-amino-acid member of the PDGF family and a core regulator of angiogenesis and vascular permeability that acts as an endothelial cell survival factor. VEGF165 signals through the receptor tyrosine kinases VEGFR1 (Flt-1) and VEGFR2 (Flk-1/KDR) and binds the co-receptors neuropilin 1 and 2 to enhance VEGFR2 activation, with a receptor-binding cystine-knot structure stabilized by eight conserved cysteines. It is widely used to culture primary endothelial cells such as HUVECs under serum-free conditions and to derive endothelial cells from iPSCs and ESCs for human vascular tissue models, and it also promotes neurogenesis, neural stem cell proliferation, glial cell survival and vascularized brain organoid formation. VEGF further supports bone formation, mesenchymal stem cell differentiation and survival of chondrocytes, hematopoietic stem cells and tumor cells, and it is a central target in anti-angiogenic cancer and ocular disease therapies, making recombinant VEGF165 a versatile reagent for vascular, neural and stem cell research. This protein is optimized for in vivo and functional applications: low-endotoxin, tag-free, and carrier-free, supporting reproducible performance in demanding preclinical and bioactivity studies. Species reactivity: human. Species similarity: mouse - 88%, rat - 88%, bovine - 94%, porcine - 97%.

Storage

Store at the stock concentration at 4°C . **Do not freeze.**

It is not uncommon for a floccule or precipitate to appear during storage. The floccule is typically buffer salts precipitating out of solution or a small bit of protein aggregation. For information on how to remove floccules or precipitates see our FAQ's at <https://bioxcell.com/faqs>.

Store lyophilized protein between -20 °C and -80 °C until the date of expiry. Avoid freeze-thaw cycles

Conditions: For research use only. Not for use in diagnostic or therapeutic

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