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Product Data Sheet

human cell expressed VEGF-165^{HCX}

Source	A DNA sequence encoding the human splice isoform VEGF-165 protein sequence (containing the signal peptide sequence, and the mature human VEGF-165 sequence) was expressed in modified human 293 cells.
Molecular Mass	Symansis VEGF-165^{HCX} migrates as a band between 15 and 25 kDa in SDS-PAGE. This compares with the predicted molecular mass of 19.2kDa.
pI	Unmodified human VEGF-165^{HCX} has a predicted pI of 7.6
Purity	>95%, as determined by SDS-PAGE and visualized by silver stain.
Formulation	When reconstituted in 0.5 ml sterile phosphate-buffered saline, the solution will contain 1% human serum albumin (HSA) and 10% trehalose.
Reconstitution	It is recommended that 0.5 ml of sterile phosphate-buffered saline be added to the vial.
Storage	Lyophilized products should be stored at 2 to 8°C. Following reconstitution short-term storage at 4°C is recommended and longer-term storage of aliquots at -18 to -20°C. Repeated freeze thawing is not recommended.
Activity	The ED50 of Symansis VEGF-165^{HCX} is typically 2.0-7.0 ng/ml as measured in a cell proliferation assay using human umbilical vein endothelial (HUVEC) cells
Background Information	Vascular endothelial growth factor (VEGF) is a member of the cysteine-knot growth factor superfamily. Five VEGF splice variants exist including VEGF-121, VEGF-145, VEGF-165, VEGF-189; and VEGF-206. VEGF-165 is the most abundant and active isoform. VEGF-165 functions as a growth factor in angiogenesis, vasculogenesis and endothelial cell growth. It is widely expressed by normal tissues and by many tumour cells in response to a variety of cytokines, oncogene expression and hypoxia. VEGF-165 acts as a specific mitogen and survival factor for vascular endothelial cells, inducing microvascular permeability, cell migration and regulates the differentiation and survival of hematopoietic progenitor cells to affect hematopoiesis, immune function and tumour progression. VEGF-165 also plays roles in neurogenesis and blood brain barrier function. Local administration of VEGF-165 has been shown to enhance re-endothelialization in denuded arteries *in vivo* and increase new blood vessel formation in ischemic myocardium and limbs. Inhibitors of VEGF also have potential therapeutic applications, particularly as angiogenesis inhibitors to inhibit the growth of solid tumours. Structurally, VEGF-165 is related to platelet-derived growth factor (PDGF) and exists as disulfide linked homodimer and contains 4 potential N-linked glycosylation sites. For a review on the biology of VEGF please refer to Ferrara N *et al.,* (2003) *Nat Med.* **9**(6): 669-76.
Theoretical Sequence	APMAEGGGQNHHEVVKFMDVYQRSYCHPIETLVDIFQEYPDEIEYIFKPSCVPLMRCG GCCNDEGLECVPTEESNITMQIMRIKPHQGQHIGEMSFLQHNKCECRPKKDRARQEN PCGPCSERRKHLFVQDPQTCKCSCKNTDSRCKARQLELNERTCRCDKPRR

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