

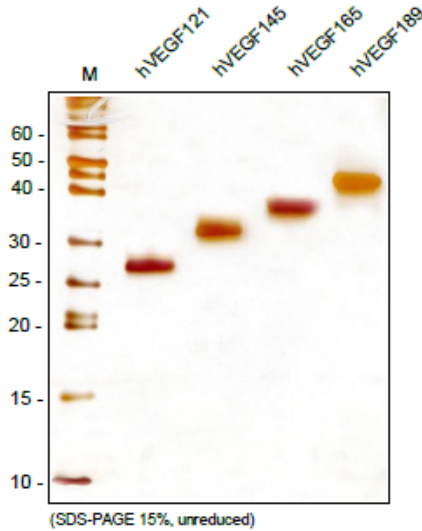
## VEGFA

### Recombinant Human VEGF 189

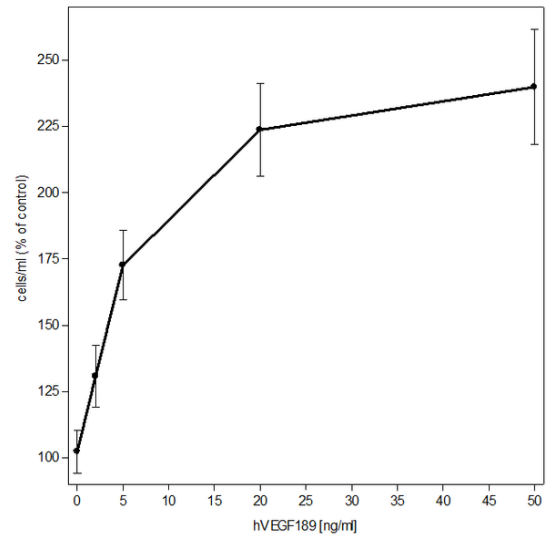
<b>Catalog No.</b>	CRV114A CRV114B CRV114C	<b>Quantity:</b>	2 µg 5 µg 20 µg
<b>Alternate Names:</b>	Vascular endothelial growth factor A, VEGF-A, Vascular permeability factor, VPF		
<b>Description:</b>	VEGF is a member of the platelet-derived growth factor family. It is a specific mitogen for vascular endothelial cells and a strong angiogenic factor <i>in vivo</i> . Five different proteins are generated by differential splicing: VEGF <sub>121</sub> , VEGF <sub>145</sub> , VEGF <sub>165</sub> , VEGF <sub>189</sub> and VEGF <sub>206</sub> . The most abundant form is VEGF <sub>165</sub> . Whereas VEGF <sub>121</sub> and VEGF <sub>165</sub> are secreted proteins, VEGF <sub>145</sub> , VEGF <sub>189</sub> and VEGF <sub>206</sub> are strongly cell-associated. The isoforms VEGF <sub>145</sub> , VEGF <sub>165</sub> and VEGF <sub>189</sub> bind to heparin with high affinity. VEGF <sub>165</sub> is apparently a homodimer, but preparations of VEGF <sub>165</sub> show some heterogeneity on SDS gels, depending on the secretion of different glycosylation patterns. All dimeric forms have similar biological activities but their bio-availability is very different. There is good evidence that heterodimeric molecules between the different isoforms also exist and that different cells and tissues express different VEGF isoforms. The other members of this increasing growth factor family are VEGF-B, -C, -D and -E. Another member is the Placenta growth factor PlGF.		
<b>UniProt ID:</b>	P15692-2		
<b>Gene ID:</b>	7422		
<b>Source:</b>	<i>E. coli</i>		
<b>Molecular Weight:</b>	~40 kDa (189 aa) homodimer on SDS-PAGE, non-reduced		
<b>Formulation:</b>	Lyophilized from 50 mM Acetic Acid		
<b>Purity:</b>	>98% by SDS-PAGE, visualized with silver stain		
<b>Endotoxin Level:</b>	< 0.1 ng/µg		
<b>Biological Activity:</b>	ED <sub>50</sub> typically 2-10 ng/ml, determined by a cell proliferation assay using primary human umbilical vein endontheial cells (HUVEC)		
<b>N Terminal Sequence:</b>	APMAEGG		
<b>Amino Acid Sequence:</b>	APMAEGGGQN HHEVVKFMDV YQRSYCHPIE TLVDIFQEYP DEIEYIFKPS CVPLMRCGGC CNDEGLECVP TEESNITMQI MRIKPHQGQH IGEMSFLQHN KCECRPKKDR ARQEKKSVRG KGKGQKRKRK KSRYKSWSV P CGPCSERRKH LFVQDPQTCK CCKNTDSRC KARQLELNER TCRCDKPRR		
<b>Applications:</b>	Functional studies, ELISA		
<b>Reconstitution:</b>	<b>Centrifuge vial prior to opening.</b> Reconstitute in PBS or medium to a concentration no less than 50 µg/ml containing at least 0.1% HSA or BSA.		
<b>Storage &amp; Stability:</b>	The lyophilized protein is stable for 1 year at -20°C to -80°C. After reconstitution, store in working aliquots at -20°C to -80°C. <b>Avoid repeated freeze-thaw cycles.</b>		



SDS-PAGE analysis of recombinant human VEGF-A isoforms produced in *E. coli*. Samples were loaded under non-reducing conditions in 15% SDS-polyacrylamide gel and stained with Silver stain.



VEGF189-induced proliferation of primary human dermal lymphatic endothelial cells (HDLEC). HDLECs were stimulated with increasing amounts of recombinant human VEGF189.



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