

## VEGF145 active protein

Human VEGF145

|                              |                       |                            |
|------------------------------|-----------------------|----------------------------|
| CATALOG #<br><b>AAA79177</b> | HOST<br><b>E Coli</b> | REACTIVITY<br><b>Human</b> |
|------------------------------|-----------------------|----------------------------|

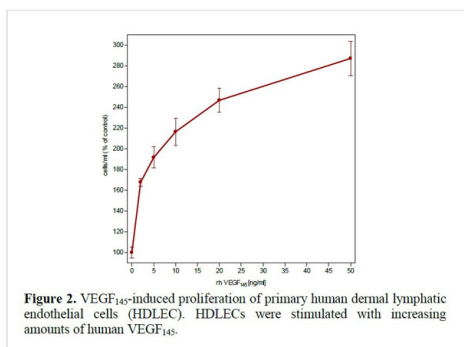
### PRODUCT SYNONYMS

VEGF145; Human VEGF145; Recombinant Human Vascular Endothelial Growth Factor145; VEGF-A; VPF; VEGF145 active protein

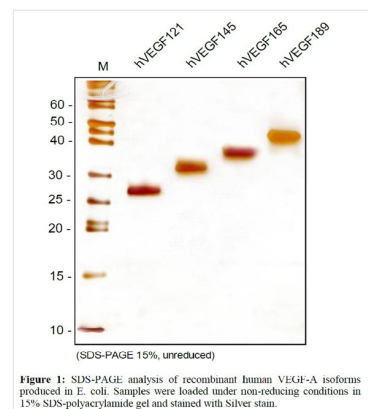
### PRODUCT SPECIFICATIONS

|                         |                                                                                                                                                                         |
|-------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Host                    | E Coli                                                                                                                                                                  |
| Reactivity              | Human                                                                                                                                                                   |
| Purity/Purification     | > 95% by SDS-PAGE & silver stain                                                                                                                                        |
| Form/Format             | Lyophilized                                                                                                                                                             |
| Sequence                | N-Terminal Sequence:A PMAEGG                                                                                                                                            |
| Sequence Length         | 145                                                                                                                                                                     |
| Endotoxin Level         | < 0.1ng per ug of human VEGF145                                                                                                                                         |
| Buffer                  | 50 mM acetic acid                                                                                                                                                       |
| Preparation and Storage | Lyophilized samples are stable for greater than six months at -20 degree C to -70 degree C. Reconstituted VEGF145 should be stored in working aliquots at -20 degree C. |

### IMAGES



Application Data



Application Data

## ADDITIONAL INFORMATION

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|---------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Related Product Information for VEGF145 active protein</b> | A vascular endothelial growth factor (VEGF) mRNA species containing exons 1 -6 and 8 of the VEGF gene was found to be expressed as a major VEGF mRNA form in several cell lines derived from carcinomas of the female reproductive system. This mRNA is predicted to encode a VEGF form of 145 amino acids (VEGF145). VEGF145 produced in insect cells is a homodimeric, 20,5 kDa protein belonging to the VEGF-A family. Recombinant VEGF145 induced the proliferation of vascular endothelial cells and promoted angiogenesis in vivo. VEGF145 was compared with previously characterized VEGF species with respect to interaction with heparinlike molecules, cellular distribution, VEGF receptor recognition, and extracellular matrix (ECM) binding ability. VEGF145 shares with VEGF165 the ability to bind to the KDR/flk-1 receptor of endothelial cells. It also binds to heparin with an affinity similar to that of VEGF165. However, VEGF145 does not bind to two additional endothelial cell surface receptors that are recognized by VEGF165 but not by VEGF121. VEGF145 is secreted from producing cells as are VEGF121 and VEGF165. However, VEGF121 and VEGF165 do not bind to the ECM produced by corneal endothelial cells, whereas VEGF145 binds efficiently to this ECM. Basic fibroblast growth factor (bFGF)-depleted ECM containing bound VEGF145 induces proliferation of endothelial cells, indicating that the bound VEGF145 is active. The mechanism by which VEGF145 binds to the ECM differs from that of bFGF. Digestion of the ECM by heparinase inhibited the binding of bFGF to the ECM and released prebound bFGF, whereas the binding of VEGF145 was not affected by heparinase digestion. It therefore seems that VEGF145 possesses a unique combination of biological properties distinct from those of previously characterized VEGF species. The other members of this increasing growth factor family are VEGF-B, -C, -D and -E. Another member is the Placenta growth factor PIGF. |
| <b>Product Categories/Family for VEGF145 active protein</b>   | <a href="#">Cytokines &amp; Growth Factors</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>References</b>                                             | 1. Breier et al., Dev 114:521, 1992 2. Fiebig et al., Eur J Biochem 211:19, 1993 3. Flamme et al., Dev Biol 162:699, 1995 4. Kremer et al., Cancer Res 57:3852, 1997 5. Poltorak et al., JBC 272:7151, 1997                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

## NCBI AND UNIPROT INFORMATION

|                                         |                                                                                                                                                                                                                                                                                                           |
|-----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>NCBI GI #</b>                        | <a href="#">76781480</a>                                                                                                                                                                                                                                                                                  |
| <b>NCBI GeneID</b>                      | <a href="#">7422</a>                                                                                                                                                                                                                                                                                      |
| <b>NCBI Accession #</b>                 | <a href="#">NP_001191313.1</a>                                                                                                                                                                                                                                                                            |
| <b>NCBI GenBank Nucleotide #</b>        | <a href="#">NM_001171624</a>                                                                                                                                                                                                                                                                              |
| <b>UniProt Accession #</b>              | <a href="#">P15692</a> ; <a href="#">O60720</a> ; <a href="#">O75875</a> ; <a href="#">Q074Z4</a> ; <a href="#">Q16889</a> ; <a href="#">Q5UB46</a> ; <a href="#">Q6P0P5</a> ; <a href="#">Q96KJ0</a> ; <a href="#">Q96L82</a> ; <a href="#">Q96NW5</a> ; <a href="#">Q9H1W8</a> ; <a href="#">B5BU86</a> |
| <b>Molecular Weight</b>                 | 34 kDa                                                                                                                                                                                                                                                                                                    |
| <b>NCBI Official Full Name</b>          | vascular endothelial growth factor A isoform a                                                                                                                                                                                                                                                            |
| <b>NCBI Official Synonym Full Names</b> | vascular endothelial growth factor A                                                                                                                                                                                                                                                                      |
| <b>NCBI Official Symbol</b>             | VEGFA                                                                                                                                                                                                                                                                                                     |
| <b>NCBI Official Synonym Symbols</b>    | VPF; VEGF; MVCD1                                                                                                                                                                                                                                                                                          |
| <b>NCBI Protein Information</b>         | vascular endothelial growth factor A; vascular permeability factor                                                                                                                                                                                                                                        |
| <b>UniProt Protein Name</b>             | Vascular endothelial growth factor A                                                                                                                                                                                                                                                                      |
| <b>UniProt Gene Name</b>                | <b>VEGFA</b>                                                                                                                                                                                                                                                                                              |
| <b>UniProt Synonym Gene Names</b>       | VEGF; VEGF-A; VPF                                                                                                                                                                                                                                                                                         |
| <b>UniProt Entry Name</b>               | VEGFA_HUMAN                                                                                                                                                                                                                                                                                               |

**For Research Use Only.** Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.