

VEGF-C152S active protein

Rat VEGF-C152S

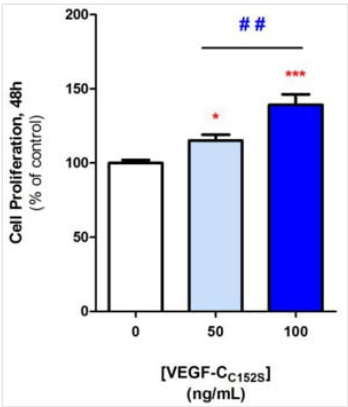
CATALOG # AAA79274	HOST Insect Cells	REACTIVITY Rat
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PRODUCT SYNONYMS

VEGF-C152S; Rat VEGF-C152S; Vascular Endothelial Growth Factor C; VEGFC; VEGF-C152S active protein

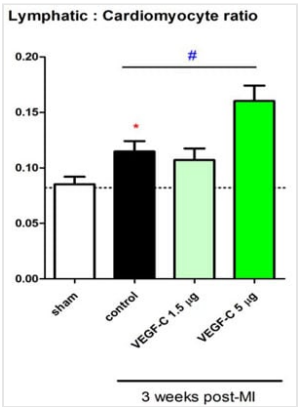
PRODUCT SPECIFICATIONS

Host	Insect Cells
Reactivity	Rat
Purity/Purification	> 90% by SDS-PAGE & silver stain
Form/Format	Lyophilized
Sequence	DTVKLAAAHY NTEILKSIDN EWRKTQCMR EVCIDVGKEF GAATNTFFKP PSVSVYRCGG CCNSEGLQCM NTSTGYLSKT LFEITVPLSQ GPKPVTISFA NHTSCRCMSK LDVYRQVHSI IHHHHHH
Sequence Length	127
Buffer	50 mM acetic acid
Stabilizer	BSA
Reconstitution	Centrifuge the vial prior to opening! The lyophilized VEGF-C152S should be reconstituted in PBS or medium to a concentration not lower than 50 ug/ml.
Biological Activity	(A) The proliferative response to rrVEGF-CC152S was assayed in VEGFR3-expressing porcine aortic endothelial (PAE) cells (in vitro). (B) The lymphangiogenic response to rrVEGF-CC152S loaded in a biopolymeric albumin-alginate microcapsules for targeted slow-release was assayed in male Wistar rats.
Protein RefSeq	NP_446105.1
mRNA RefSeq:	NM_053653.1
Preparation and Storage	Lyophilized samples are stable for greater than six months at -20 degree C to -70 degree C. Reconstituted VEGF-C152S should be stored in working aliquots at -20 degree C. Avoid repeated freeze-thaw cycles!



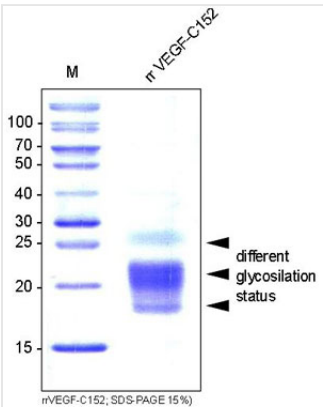
Application Data

In vitro: The proliferative response to recombinant rat VEGF-CC152S was assayed in VEGFR3-expressing porcine aortic endothelial (PAE) cells. Briefly, cells were plated in 12-well plates and incubated in DMEM medium supplemented with 1% fetal calf serum for cell cycle arrest 24h prior to stimulation of cell proliferation with recombinant VEGF-CC152S at the concentrations of 50 and 100 ng/mL. After 48h in culture, the cell proliferative response was assayed (WST-1 colorimetric assay), and the results expressed as % of control non-stimulated cells (mean + sem).



Application Data

In vivo: The lymphangiogenic response to recombinant rat VEGFCC152S loaded in our biopolymeric albumin-alginate microcapsules for targeted slow-release was assayed in male Wistar rats. Briefly, after ischemiareperfusion injury to induce myocardial infarction, VEGF-CC152S at the dose of 1.5 or 5 ug per heart was injected intra-myocardially. Lymphatic responses in the myocardium were analyzed by IHC at 3 weeks post-MI using LYVE1 antibody. Results are expressed as lymphatic vessel to cardiomyocyte ratio (mean + sem).The experiments were performed by the research group of Prof. Dr. E. Brakenhielm – Rouen University (see also: Henri O et al., Circulation, March 2016, DOI: 10.1161



SDS-PAGE

SDS-PAGE analysis of recombinant rat VEGF-C152 mutant. Sample was loaded in 15% SDS-polyacrylamide gel under reducing conditions and stained with Coomassie blue.

ADDITIONAL INFORMATION

Related Product Information for VEGF-C152S active protein

VEGF-C152S is a point mutant generated by the replacement of the second conserved Cys residue of the recombinant processed VEGF-C by a Ser residue. VEGF-C152S is analog to the human VEGF-C156S mutant and only active toward VEGFR-3/FLT-4 but, unlike wild type VEGF-C, is unable to bind to and to activate signalling through VEGFR-2/KDR. VEGF-C152S was inactive in the vascular permeability assay and did not increase migration of the capillary endothelial cells, indicating that these VEGF-like effects of VEGF-C require VEGFR-2 binding. VEGF-C, also known as Vascular Endothelial Growth Factor Related Protein (VRP), is a recently discovered VEGF growth factor family member that is most closely related to VEGF-D. The rat VEGF-C cDNA encodes a pre-pro-protein of 416 amino acids residues. It is almost identical to the mouse VEGF-C protein. Similar to VEGF-D, VEGF-C has a VEGF homology domain spanning the middle third of the precursor molecule and long N- and C-terminal extensions. In adults, VEGF-C is highly expressed in heart, placenta, ovary and small intestine. Recombinant rat VEGF-C, lacking the N- and C-terminal extensions and containing only the middle VEGF homology domain, forms primarily non-covalently linked dimers. This protein is a ligand for both VEGFR-2/KDR and VEGFR-3/FLT-4. Since VEGFR-3 is strongly expressed in lymphatic endothelial cells, it has been postulated that VEGF-C is involved in the regulation of the growth and/or differentiation of lymphatic endothelium. Although recombinant rat VEGF-C is also a mitogen for vascular endothelial cells, it is much less potent than VEGF-A. The recombinant rat VEGF-C contains 127 amino acids residues and was fused to a His-tag (6x His) at the C-terminal end. As a result of glycosylation VEGF-C migrates as an 18-24 kDa protein in SDS-PAGE under reducing conditions.

Product Categories/Family for VEGF-C152S active protein	Cytokines & Growth Factors
References	1. Joukov et al., J Biol Chem 273 :6599, 1998 2. Joukov et al., EMBO J 15:290, 1996 3. Olofsson et al., Curr Opin Biotech 10:528, 1999 4. Kirkin et al., Eur J Biochem 268:5530, 2001

NCBI AND UNIPROT INFORMATION

NCBI GI #	16758992
NCBI GeneID	114111
NCBI Accession #	NP_001165097
NCBI GenBank Nucleotide #	NM_001171626
UniProt Accession #	P15692; Q91ZE3; O35757
Molecular Weight	18-24 kDa
NCBI Official Full Name	vascular endothelial growth factor C
NCBI Official Synonym Full Names	vascular endothelial growth factor C
NCBI Official Symbol	Vegfc
NCBI Protein Information	vascular endothelial growth factor C; VRP; VEGF-C; flt4-L; flt4 ligand; vascular endothelial growth factor-related protein
UniProt Protein Name	Vascular endothelial growth factor C
UniProt Gene Name	Vegfc
UniProt Synonym Gene Names	VEGF-C; Flt4-L; VRP
UniProt Entry Name	VEGFC_RAT

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.

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Online datasheet: <https://stage.aaabiotech.com/insect-cells-rat-active-protein/vegfc-c152s/79274>