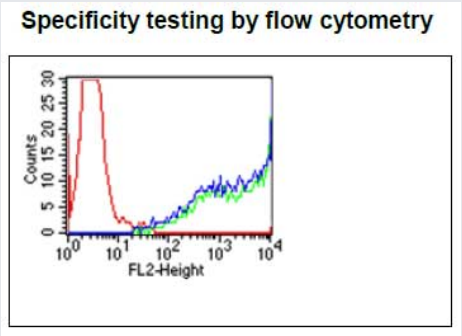
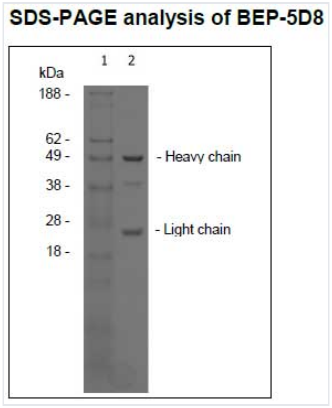
VEGFR2 Antibody – Rat Monoclonal

PRODUCT OVERVIEW

Product Name	VEGFR2, Monoclonal Antibody
Full Product Name	Rat anti-human VEGFR2 monoclonal antibody
Product Gene Name	anti-VEGFR2 antibody
Clonality	Monoclonal
Isotype	IgG2a/kappa
Clone Number	BEP-5D8
Host	Rat
Purity/Purification	Protein G
Specificity	anti-human/pig VEGFR2 (epitope on the third extracellular immunoglobulin-like domain)
Preparation and Storage	Short term: 2 degree C - 8 degree C Long term: -20 degree C (avoid repeated freezing and thawing)
Molecular Weight	79,634 Da
OMIM	191306
Buffer	Phosphate buffered saline, pH 7.2
Immunogen	Genetic immunisation with cDNA encoding human VEGFR2
Selection	Based on recognition of the complete native protein expressed on transfected mammalian cells
Applications Tested/Suitable for anti-VEGFR2 antibody	Flow Cytometry (FC/FACS), C-ELISA (EIA), ELISA (EIA)
Application Notes for anti-VEGFR2 antibody	Flow Cytometry: 1.2 mug/10^6 cells ELISA: 1:200 - 1:400 C-ELISA: 1:200 - 1:400
Related Product Information for anti-VEGFR2 antibody	The vascular endothelial growth factor receptor-2 (VEGFR-2) plays an important role in the control of angiogenesis. This molecule is expressed on the surface of circulating endothelial stem cells as well as on adult vascular endothelial cells and other cell types (1). It is a 200-kDa type I transmembrane protein, consisting of a 19 amino acid leader peptide, a 744 amino acid extracellular domain made up of 7 immunoglobulin-like domains, a 24 amino acid transmembrane region and a 568 amino acid cytoplasmic domain. Interactions with VEGF ligands will stimulate angiogenesis, required in wound healing but also misused by tumours to promote their vascularization (2). The current monoclonal antibody was developed by genetic immunization against the complete extracellular domain of human VEGFR-2 and has been shown to be specific for the native target molecule and its counterpart in pigs using FACscan analyses on viable, transiently-transfected human BOSC23 cells (see Fig. 1). It binds to an epitope on the third extracellular immunoglobulin-like domain.
Product References and Citations for anti-VEGFR2 antibody	1. Paz K, Zhu Z. (2005) Development of angiogenesis inhibitors to vascular endothelial growth factor receptor 2. Current status and future perspective. Front. Biosci. 10:1415-1439. 2. Youssoufian H., Hicklin D.J., Rowinsky E.K. (2007) Monoclonal antibodies to the vascular endothelial growth factor receptor-2 in cancer therapy. Clin. Cancer Res. 13 (18 Suppl): 5544- 5528.
Other Notes	Small volumes of anti-VEGFR2 antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for VEGFR2 purchase	MBS468053 is an antibody targeting VEGFR2. Also known as Rat anti-human VEGFR2 monoclonal antibody. Host: Rat.



Flow Cytometry (FC/FACS) of anti-VEGFR2 antibody
Fig.1: GM-1007. BOSC23 cells were transiently transfected with an expression vector encoding either human VEGFR2 (green curve), pig VEGFR2 (blue curve) or an irrelevant protein (control transfectant, red curve). Binding of BEP-5D8 was detected with a PE-conjugated secondary antibody. A positive signal was obtained only with human and pig VEGFR2 transfected cells.



Testing Data of anti-VEGFR2 antibody
Fig.2: SDS-PAGE analysis of purified BEP-5D8 monoclonal antibody. Lane 1: molecular weight marker, Lane 2: 2 mug of purified BEP-5D8 antibody. Proteins were separated by SDS-PAGE and stained with RAPID StainTM Reagent 3.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for VEGFR2. It may not necessarily be applicable to this product.

NCBI GI #	11321597
NCBI GeneID	3791
NCBI Accession #	NP_002244.1
UniProt Secondary Accession #	O60723; Q14178; A2RRS0; B5A925; C5IFA0
UniProt Related Accession #	P35968
GenBank Nucleotide #	NM_002253.2
NCBI Official Full Name	vascular endothelial growth factor receptor 2
NCBI Official Synonym Full Names	kinase insert domain receptor
NCBI Official Symbol	KDR
NCBI Official Synonym Symbols	FLK1; CD309; VEGFR; VEGFR2
UniProt Protein Name	Vascular endothelial growth factor receptor 2
UniProt Synonym Protein Names	Fetal liver kinase 1; FLK-1; Kinase insert domain receptor; KDR; Protein-tyrosine kinase receptor flk-1; CD_antigen: CD309
UniProt Gene Name	KDR
UniProt Synonym Gene Names	FLK1; VEGFR2; VEGFR-2; FLK-1; KDR
UniProt Entry Name	VGFR2_HUMAN
NCBI Protein Information	vascular endothelial growth factor receptor 2
NCBI Summary for VEGFR2	Vascular endothelial growth factor (VEGF) is a major growth factor for endothelial cells. This gene encodes one of the two receptors of the VEGF. This receptor, known as kinase insert domain receptor, is a type III receptor tyrosine kinase. It functions as the main mediator of VEGF-induced endothelial proliferation, survival, migration, tubular morphogenesis and sprouting. The signalling and trafficking of this receptor are regulated by multiple factors, including Rab GTPase, P2Y purine nucleotide receptor, integrin alphaVbeta3, T-cell protein tyrosine phosphatase, etc.. Mutations of this gene are implicated in infantile capillary hemangiomas. [provided by RefSeq, May 2009]

UniProt Comments for VEGFR2	VEGFR2: a receptor tyrosine kinase of the VEGFR family. High affinity receptor for VEGF and VEGF-C. Ligand binding induces autophosphorylation and activation. Activated receptor recruits proteins including Shc, GRB2, PI3K, Nck, SHP-1 and SHP-2. Plays a key role in vascular development and regulation of vascular permeability. Protein type: EC 2.7.10.1; Kinase, protein; Membrane protein, integral; Protein kinase, TK; Protein kinase, tyrosine (receptor); TK group; VEGFR family Chromosomal Location of Human Ortholog: 4q11-q12 Cellular Component: cell junction; early endosome; endoplasmic reticulum; endosome; Golgi apparatus; integral to plasma membrane; lipid raft; plasma membrane Molecular Function: growth factor binding; Hsp90 protein binding; integrin binding; protein binding; protein-tyrosine kinase activity; receptor signaling protein tyrosine kinase activity; transmembrane receptor protein tyrosine kinase activity; vascular endothelial growth factor receptor activity Biological Process: angiogenesis; cell migration during sprouting angiogenesis; embryonic hemopoiesis; extracellular matrix organization and biogenesis; negative regulation of apoptosis; peptidyl-tyrosine phosphorylation; positive regulation of angiogenesis; positive regulation of cell migration; positive regulation of cell proliferation; positive regulation of endothelial cell proliferation; positive regulation of focal adhesion formation; positive regulation of macroautophagy; positive regulation of MAPKKK cascade; positive regulation of mitochondrial depolarization; positive regulation of nitric-oxide synthase biosynthetic process; positive regulation of phosphoinositide 3-kinase cascade; positive regulation of positive chemotaxis; positive regulation of protein amino acid phosphorylation; protein amino acid autophosphorylation; regulation of cell shape; transmembrane receptor protein tyrosine kinase signaling pathway; vascular endothelial growth factor receptor signaling pathway; vasculogenesis Disease: Hemangioma, Capillary Infantile
Research Articles on VEGFR2	**1.** Ramucirumab, a human immunoglobulin G1 monoclonal antibody targeting the vascular endothelial growth factor receptor-2, was well tolerated in patients with advanced solid tumors.
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