Human VEGF-D Alexa Fluor® 405-conjugated Antibody

Monoclonal Mouse IgG_1 Clone # 78902

Catalog Number: FAB2861V

100 µg

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human VEGF-D in ELISAs and Western blots. In ELISAs, this antibody shows less than 1% cross-reactivity with recombinant human (rh) $VEGF_{121}$, rhVEGF$_{165}$, rhVEGF-B$_{167}$, rhVEGF-B$_{186}$, and rhVEGF-C. In West
Source	Monoclonal Mouse IgG_1 Clone # 78902
Purification	Protein A or G purified from ascites
Immunogen	Mouse myeloma cell line NS0-derived recombinant human VEGF-D Phe93-Ser201 Accession # O43915
Conjugate	Alexa Fluor 405 Excitation Wavelength: 405 nm Emission Wavelength: 421 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

ELISA Capture (Matched Antibody Pair)	Optimal dilution of this antibody should be experimentally determined.
ELISA Detection (Matched Antibody Pair)	Optimal dilution of this antibody should be experimentally determined.
Western Blot	Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

BACKGROUND

Vascular endothelial growth factor D (VEGF-D), also known as *c-fos*-induced growth factor (FIGF), is a secreted glycoprotein of the VEGF/PDGF family. VEGFs regulate angiogenesis and lymphangiogenesis during development and tumor growth, and are characterized by eight conserved cysteine residues that form a cystine knot structure (1-3). VEGF-C and VEGF-D, which share 23% amino acid (aa) sequence identity, are uniquely expressed as preproproteins that contain long N- and C-terminal propeptide extensions around the VEGF homology domain (VHD) (1, 2). Proteolytic processing of the 354 aa VEGF-D preproprotein creates a secreted proprotein. Further processing by extracellular serine proteases, such as plasmin or furin-like proprotein convertases, forms mature VEGF-D consisting of non-covalently linked 42 kDa homodimers of the 117 aa VHD (4-6). Mature human VEGF-D shares 94%, 95%, 99%, 97% and 93% aa identity with mouse, rat, equine, canine and bovine VEGF-D, respectively (4, 5). It is expressed in adult lung, heart, muscle, and small intestine, and is most abundantly expressed in fetal lungs and skin (1-4). Mouse and human VEGF-D are ligands for VEGF Receptor 3 (VEGF R3, also called Flt-4) that are active across species and show enhanced affinity when processed (7). Processed human VEGF-D is also a ligand for VEGF R2, also called Flk-1 or KDR (7). VEGF R3 is strongly expressed in lymphatic endothelial cells and is essential for regulation of the growth and differentiation of lymphatic endothelium (1, 2). While VEGF-C is the critical ligand for VEGF R3 during embryonic lymphatic development, VEGF-D is most active in neonatal lymphatic maturation and bone growth (8-10). Both promote tumor lymphangiogenesis (11). Consonant with their activity on VEGF receptors, binding of VEGF-C and VEGF-D to neuropilins contributes to VEGF R3 signaling in lymphangiogenesis, while binding to integrin α9β1 mediates endothelial cell adhesion and migration (12, 13).

PRODUCT SPECIFIC NOTICES

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