

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human VEGF-C in direct ELISAs and Western blots. In direct ELISAs, less than 1% cross-reactivity with recombinant human (rh) VEGF-D and rhVEGF-A is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	<i>E. coli</i> -derived recombinant human VEGF-C
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS.

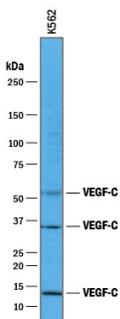
APPLICATIONS

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.

	Recommended Concentration	Sample
Western Blot	1 µg/mL	See Below
Immunohistochemistry	5-15 µg/mL	See Below

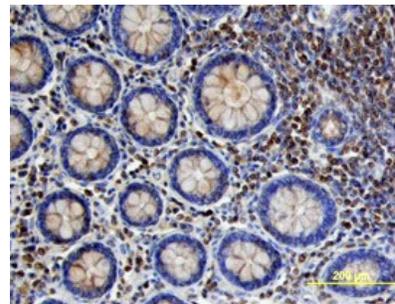
DATA

Western Blot



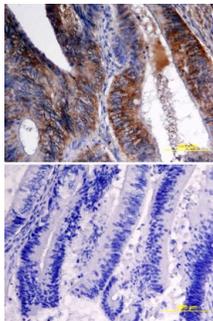
Detection of Human VEGF-C by Western Blot. Western blot shows lysates of K562 human chronic myelogenous leukemia cell line. PVDF membrane was probed with 1 µg/mL of Goat Anti-Human VEGF-C Antigen Affinity-purified Polyclonal Antibody (Catalog # AF752) followed by HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF017). Specific bands were detected for VEGF-C at approximately 52 kDa, 34 kDa, and 13 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

Immunohistochemistry



VEGF-C in Human Colon Cancer Tissue. VEGF-C was detected in immersion fixed paraffin-embedded sections of human colon cancer tissue using Goat Anti-Human VEGF-C Antigen Affinity-purified Polyclonal Antibody (Catalog # AF752) at 10 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Goat HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS008) and counterstained with hematoxylin (blue). Specific labeling was localized to stromal cells surrounding crypts in the colon mucosa (cross section across crypts). View our protocol for [Chromogenic IHC Staining of Paraffin-embedded Tissue Sections](#).

Immunohistochemistry



VEGF-C in Human Colon Cancer Tissue. VEGF-C was detected in immersion fixed paraffin-embedded sections of human colon cancer tissue using Goat Anti-Human VEGF-C Antigen Affinity-purified Polyclonal Antibody (Catalog # AF752) at 15 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Goat HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS008) and counterstained with hematoxylin (blue). Specific labeling was localized to epithelial cells in crypts of the colon mucosa (longitudinal section of crypts). Lower panel shows a lack of labeling if primary antibodies are omitted and tissue is stained only with secondary antibody followed by incubation with detection reagents. View our protocol for [Chromogenic IHC Staining of Paraffin-embedded Tissue Sections](#).

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	<p>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</p> <ul style="list-style-type: none"> ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

Vascular endothelial growth factor C (VEGF-C) and VEGF-D constitute a VEGF sub-family that share the conserved VEGF homology domain (VHD) with other VEGF family members but are distinguished by their preferential formation of non-covalent homodimers. Both VEGF-C and -D have long N- and C-terminal propeptide extensions. The VEGF-C propeptide undergoes stepwise proteolytic processing to generate ligands with increasing affinity for VEGF-R3. However, only the fully processed VEGF-C containing just the VHD can bind VEGF-R2. None of the VEGF-C forms have appreciable affinity for VEGF-R1. VEGF-C is expressed in multiple adult human tissues, most prominently in lymph nodes, heart, placenta, ovary, and small intestine. Traces of VEGF-C are also detected in brain, liver, thymus, skeletal muscles, spleen, prostate, testis and colon. Unlike other VEGF family members, VEGF-C expression is not regulated by hypoxia. VEGF-C is a lymphangiogenic growth factor and the VEGF-C/VEGF-R3 signaling pathway has been shown to be crucial for lymphangiogenesis. VEGF-C and VEGF-R3 are usually co-expressed at sites with lymphatic vessel sprouting, in the embryo, and in various pathological conditions. VEGF-C stimulates lymphangiogenesis in the avian chorioallantoic membrane model. Over-expression of VEGF-C in breast cancer cells has been shown to increase intratumoral lymphangiogenesis, resulting in enhanced metastasis to regional lymph nodes and to the lungs. Mouse tumors expressing elevated levels of VEGF-C have increased lymphatic metastasis and increased lymphatic surface area in the tumor margin. VEGF-C is also associated with lymph node metastasis of colorectal carcinoma. Besides lymphangiogenesis, VEGF-C can have potent effects on physiological angiogenesis through its interaction with VEGF R2. The protein can stimulate migration and proliferation of endothelial cells *in vitro* and *in vivo* and has been shown to stimulate angiogenesis in the mouse cornea and in rabbit hind limb ischaemia.