

**Anti-VEGF Receptor 3 Picoband Antibody**  
**Catalog # ABO12937****Specification****Anti-VEGF Receptor 3 Picoband Antibody - Product Information**

Application	WB, IHC-P, E
Primary Accession	<a href="#">P35916</a>
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized

**Description**

Rabbit IgG polyclonal antibody for VEGF Receptor 3 detection. Tested with WB, IHC-P, Direct ELISA in Human;Mouse;Rat.

**Reconstitution**

Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

**Anti-VEGF Receptor 3 Picoband Antibody - Additional Information**

**Gene ID** 2324

**Other Names**

Vascular endothelial growth factor receptor 3, VEGFR-3, 2.7.10.1, Fms-like tyrosine kinase 4, FLT-4, Tyrosine-protein kinase receptor FLT4, FLT4, VEGFR3

**Application Details**

Western blot, 0.1-0.5 µg/ml  
Immunohistochemistry(Paraffin-embedded Section), 0.5-1 µg/ml  
Direct ELISA, 0.1-0.5 µg/ml

**Subcellular Localization**

Cell membrane; Ligand-mediated autophosphorylation leads to rapid internalization.

**Tissue Specificity**

Detected in endothelial cells (at protein level). Widely expressed. Detected in fetal spleen, lung and brain. Detected in adult liver, muscle, thymus, placenta, lung, testis, ovary, prostate, heart, and kidney.

**Contents**

Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na<sub>2</sub>HPO<sub>4</sub>, 0.05mg NaN<sub>3</sub>.

**Immunogen**

E. coli-derived human VEGF Receptor 3 recombinant protein (Position: Y25-N259).

**Cross Reactivity**

No cross reactivity with other proteins.

**Storage**

**At -20°C; for one year. After r° Constitution,**

at 4°C; for one month. It can also be aliquotted and stored frozen at -20°C; for a longer time. Avoid repeated freezing and thawing.

## Anti-VEGF Receptor 3 Picoband Antibody - Protein Information

**Name** FLT4

**Synonyms** VEGFR3

### Function

Tyrosine-protein kinase that acts as a cell-surface receptor for VEGFC and VEGFD, and plays an essential role in adult lymphangiogenesis and in the development of the vascular network and the cardiovascular system during embryonic development. Promotes proliferation, survival and migration of endothelial cells, and regulates angiogenic sprouting. Signaling by activated FLT4 leads to enhanced production of VEGFC, and to a lesser degree VEGFA, thereby creating a positive feedback loop that enhances FLT4 signaling. Modulates KDR signaling by forming heterodimers. The secreted isoform 3 may function as a decoy receptor for VEGFC and/or VEGFD and play an important role as a negative regulator of VEGFC-mediated lymphangiogenesis and angiogenesis. Binding of vascular growth factors to isoform 1 or isoform 2 leads to the activation of several signaling cascades; isoform 2 seems to be less efficient in signal transduction, because it has a truncated C-terminus and therefore lacks several phosphorylation sites. Mediates activation of the MAPK1/ERK2, MAPK3/ERK1 signaling pathway, of MAPK8 and the JUN signaling pathway, and of the AKT1 signaling pathway. Phosphorylates SHC1. Mediates phosphorylation of PIK3R1, the regulatory subunit of phosphatidylinositol 3-kinase. Promotes phosphorylation of MAPK8 at 'Thr-183' and 'Tyr-185', and of AKT1 at 'Ser-473'.

### Cellular Location

Cell membrane; Single-pass type I membrane protein Cytoplasm Nucleus. Note=Ligand-mediated autophosphorylation leads to rapid internalization [Isoform 2]: Cell membrane; Single-pass type I membrane protein

### Tissue Location

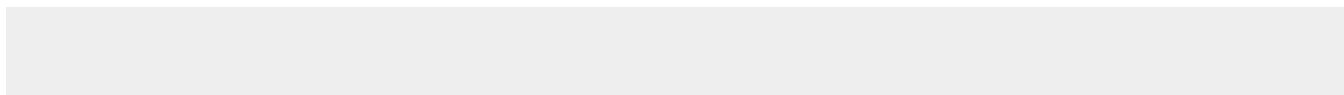
Detected in endothelial cells (at protein level). Widely expressed. Detected in fetal spleen, lung and brain. Detected in adult liver, muscle, thymus, placenta, lung, testis, ovary, prostate, heart, and kidney.

## Anti-VEGF Receptor 3 Picoband Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

## Anti-VEGF Receptor 3 Picoband Antibody - Images



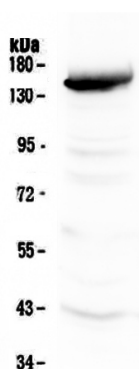


Figure 1. Western blot analysis of VEGF Receptor 3 using anti-VEGF Receptor 3 antibody (ABO12937). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions. Lane 1: rat liver tissue lysates. After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA for 50-90 minutes. Blocked the membrane with 5% Non-fat Milk/ TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-VEGF Receptor 3 antigen affinity purified polyclonal antibody (Catalog # ABO12937) at 0.5  $\mu$ g/mL overnight at 4 $^{\circ}$ C, then washed with TBS-0.1% Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:10000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit with Tanon 5200 system. A specific band was detected for VEGF Receptor 3 at approximately 153KD. The expected band size for VEGF Receptor 3 is at 153KD.

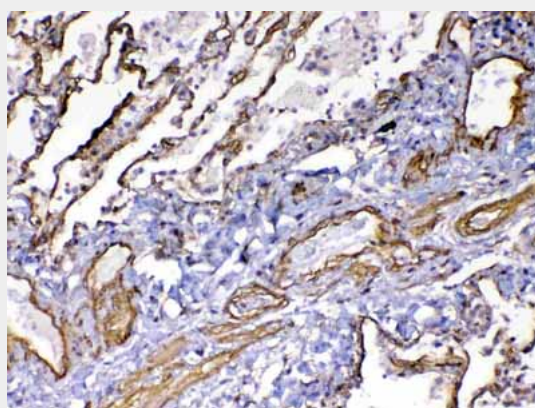


Figure 2. IHC analysis of VEGF Receptor 3 using anti-VEGF Receptor 3 antibody (ABO12937). VEGF Receptor 3 was detected in paraffin-embedded section of human lung cancer tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 $\mu$ g/mL rabbit anti-VEGF Receptor 3 Antibody (ABO12937) overnight at 4 $^{\circ}$ C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 $^{\circ}$ C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) with DAB as the chromogen.

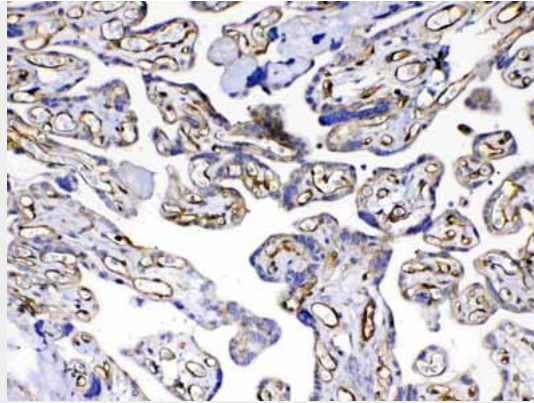


Figure 3. IHC analysis of VEGF Receptor 3 using anti-VEGF Receptor 3 antibody (ABO12937). VEGF Receptor 3 was detected in paraffin-embedded section of human placenta tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 $\mu$ g/ml rabbit anti-VEGF Receptor 3 Antibody (ABO12937) overnight at 4 $^{\circ}$ C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 $^{\circ}$ C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) with DAB as the chromogen.

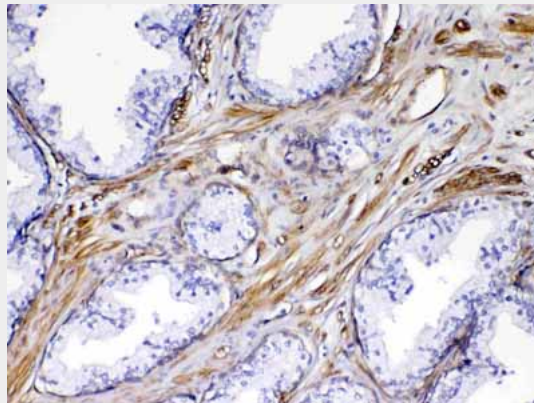
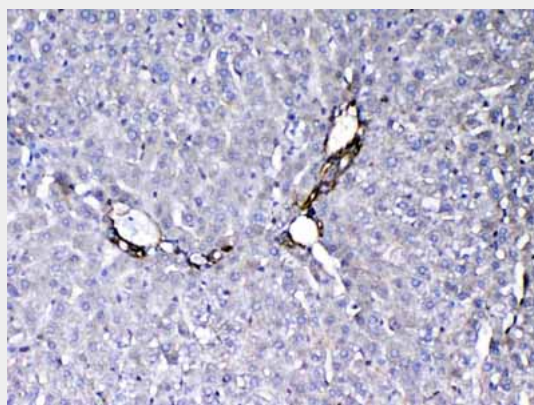
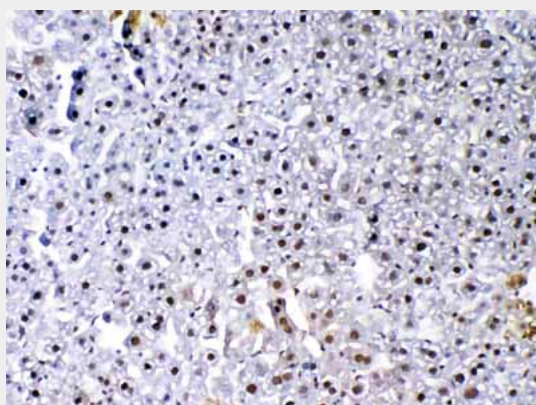
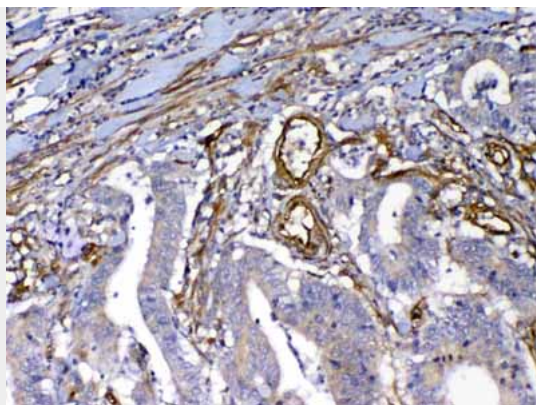


Figure 4. IHC analysis of VEGF Receptor 3 using anti-VEGF Receptor 3 antibody (ABO12937).







#### **Anti-VEGF Receptor 3 Picoband Antibody - Background**

Fms-related tyrosine kinase 4, also known as FLT4 or VEGFR3, is a protein which in humans is encoded by the FLT4 gene. It is mapped to 5q35.3. This gene encodes a tyrosine kinase receptor for vascular endothelial growth factors C and D. The protein is thought to be involved in lymphangiogenesis and maintenance of the lymphatic endothelium. FLT4 has an essential role in the development of the embryonic cardiovascular system before the emergence of the lymphatic vessels. It has been found that FLT4, which provides proangiogenic signaling when expressed on endothelium, may also have antiangiogenic properties when expressed at an avascular site by nonendothelial cells. FLT4 is also regarded as a regulator of vascular network formation.