

## Technical Data Sheet

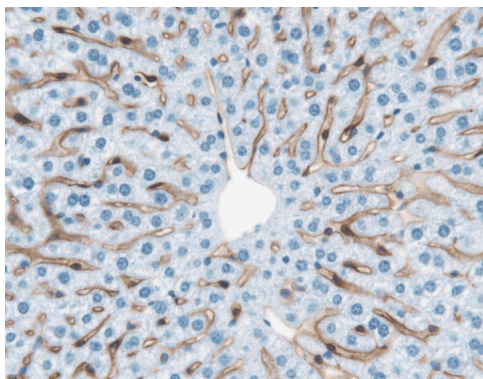
## Purified Rat Anti-Mouse VEGFR-3

## Product Information

Material Number:	552857
Size:	1.0 ml
Clone:	AFL4
Immunogen:	VEGFR-3 extracellular domain
Isotype:	Rat IgG2a, $\kappa$
Reactivity:	QC Testing: Mouse
Storage Buffer:	Aqueous buffered solution containing BSA, goat serum, and $\leq 0.09\%$ sodium azide.

## Description

The AFL4 antibody reacts with mouse VEGFR-3, an endothelial-specific receptor tyrosine kinase (RTK) related to VEGF receptors. The immunogen used was the extracellular domain of VEGFR-3, corresponding to nucleotides 45-2354 in the GeneBank L07296. VEGFR-3 is induced in all endothelial cells (EC's) during early embryogenesis, and its expression eventually disappears from the vascular endothelial cells of adult tissues. VEGFR-3 is constitutively expressed in the adult lymphatic endothelium. Although VEGFR-3 is not expressed in adult blood vessels, it is induced in vascular endothelial cells of tumor-bearing tissues. Studies have shown that both VEGF-C and VEGF-D, ligands for VEGFR-3, promote lymphatic vessel proliferation throughout central tumor areas and at their peripheries, demonstrating that such molecules aid in the spread of tumor cells from the primary tumor to local lymph nodes.



**Immunohistochemical staining of mouse liver cells.**  
Formalin-fixed, paraffin-embedded sections of Balb/c mouse liver were stained with VEGFR-3 antibody, clone AFL4 (Cat. No. 552857). The antibody labeled endothelial cells of sinusoid. Antigen retrieval with BD Retrieval A (Cat. No. 550524) was performed prior to staining. Magnification 40x.

## Preparation and Storage

Store undiluted at 4°C.

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

## Application Notes

## Application

Immunohistochemistry-paraffin	Routinely Tested
Immunohistochemistry-frozen	Tested During Development

## Recommended Assay Procedure:

**Immunohistochemistry:** The AFL4 antibody, specific for mouse VEGFR-3, is tested for immunohistochemical staining of acetone-fixed frozen sections and zinc-fixed and formalin-fixed, paraffin-embedded sections. Antigen retrieval with BD Retrieval A (Cat. No. 550524) is recommended for formalin-fixed, paraffin sections. Tissues tested were mouse spleen, liver, kidney, lung and small intestine. The antibody stains endothelial cells of lymphatic vessels. The isotype control recommended for use with this antibody is purified rat IgG2a $\kappa$  (Cat. No. 559073). For optimal indirect immunohistochemical staining, the AFL4 antibody should be titrated (1:10 to 1:50 dilution) and visualized via a three-step staining procedure in combination with polyclonal, biotin conjugated anti-rat Igs (multiple adsorbed) (Cat. No. 559286) as the secondary antibody and Streptavidin-HRP (Cat. No. 550946) together with the DAB Detection System (Cat. No. 550880). More conveniently, the Anti-Rat Ig HRP Detection Kit (Cat. No. 551013), which contains the biotinylated secondary antibody, antibody diluent, streptavidin-HRP and DAB substrate, can be used for staining.

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## Suggested Companion Products

Catalog Number	Name	Size	Clone
550524	Retrievagen A (pH 6.0)	1000 ml	(none)
559073	Purified Rat IgG2a $\kappa$ Isotype Control	0.25 mg	R35-95
559286	Biotin Goat Anti-Rat Ig	0.5 mg	Polyclonal
550946	Streptavidin HRP	50 ml	(none)
550880	DAB Substrate Kit	500 tests	(none)
551013	Anti-Rat Ig HRP Detection Kit	200 tests	(none)
559148	Antibody Diluent for IHC	125 ml	(none)

## Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
3. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
4. Please refer to [www.bdbiosciences.com/pharming/en/protocols](http://www.bdbiosciences.com/pharming/en/protocols) for technical protocols.

## References

Kubo H, Fujiwara T, Jussila L, et al. Involvement of vascular endothelial growth factor receptor-3 in maintenance of integrity of endothelial cell lining during tumor angiogenesis. *Blood*. 2000; 96(2):546-553. (Clone-specific: Western blot)

Stacker SA, Caesar C, Baldwin ME, et al. VEGF-D promotes the metastatic spread of tumor cells via the lymphatics. *Nat Med*. 2001; 7(2):186-191. (Biology)

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