

Technical Data Sheet

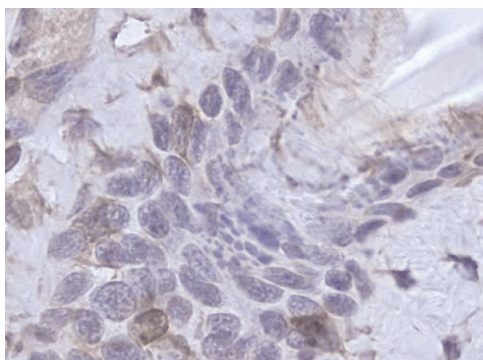
Purified Rat Anti-Mouse Flk-1

Product Information

Material Number:	550549
Alternate Name:	Fetal liver kinase 1; CD309; Kdr; VEGF receptor-2; VEGFR-2
Size:	1.0 ml
Concentration:	31.25 µg/ml
Clone:	Avas 12α1
Immunogen:	Mouse Flk-1 Recombinant Protein
Isotype:	Rat (WI) IgG2a, κ
Reactivity:	QC Testing: Mouse
Storage Buffer:	Aqueous buffered solution containing BSA, goat serum, and ≤0.09% sodium azide.

Description

The Avas 12α1 monoclonal antibody specifically binds to fetal liver kinase 1 (Flk-1), a receptor protein tyrosine kinase closely related to CD117 (c-kit) and CD140a (PDGF Receptor α chain) of the immunoglobulin superfamily. Flk-1, also known as VEGF Receptor-2 (VEGF-R2), is a receptor for vascular endothelial growth factor (VEGF). It is expressed, at the mRNA and protein levels, on distinct sets of mesoderm during gastrulation and on endothelial cells in embryonic and adult tissues. *In vivo* and *in vitro* studies indicate that Flk-1 is required for the embryonic development of vascular endothelial and hematopoietic cells.



Immunohistochemical staining of mouse Flk-1. Frozen sections of normal mouse spleen were reacted with the anti-Flk-1 antibody. Endothelial cells expressing Flk-1 can be identified by the brown labeling of their cell membranes. Amplification 20X.

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

Flow cytometry	Routinely Tested
Immunohistochemistry-frozen	Tested During Development
Immunohistochemistry-formalin (antigen retrieval required)	Not Recommended

Recommended Assay Procedure:

Immunohistochemistry: The Avas 12α1 antibody specific for mouse Flk-1 is recommended to test for immunohistochemical staining of acetone-fixed frozen sections. Tissues tested were mouse spleen, thymus and gastrointestinal tract. The antibody stains endothelial cells. The isotype control recommended for use with this antibody is purified rat IgG2a (Cat. No. 559073). For optimal indirect immunohistochemical staining, the Avas 12α1 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). Alternatively, Anti-rat Ig HRP Detection Kit (Cat. No. 551013) offers all of the necessary reagents to stain for this antibody.

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Suggested Companion Products

Catalog Number	Name	Size	Clone
559073	Purified Rat IgG2a κ Isotype Control	0.25 mg	R35-95
550946	Streptavidin HRP	50 ml	(none)
559286	Biotin Goat Anti-Rat Ig	0.5 mg	Polyclonal
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. Please refer to www.bdbiosciences.com/pharming/protocols for technical protocols.
3. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
4. Sodium azide is a reversible inhibitor of oxidative metabolism; therefore, antibody preparations containing this preservative agent must not be used in cell cultures nor injected into animals. Sodium azide may be removed by washing stained cells or plate-bound antibody or dialyzing soluble antibody in sodium azide-free buffer. Since endotoxin may also affect the results of functional studies, we recommend the NA/LE (No Azide/Low Endotoxin) antibody format, if available, for in vitro and in vivo use.
5. 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.
6. This antibody has been developed for the immunohistochemistry application. However, a routine immunohistochemistry test is not performed on every lot. Researchers are encouraged to titrate the reagent for optimal performance.
7. An isotype control should be used at the same concentration as the antibody of interest.

References

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Shalaby F, Rossant J, Yamaguchi TP, et al. Failure of blood-island formation and vasculogenesis in Flk-1-deficient mice. *Nature*. 1995; 376(6535):62-66. (Biology)

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