Technical Data Sheet

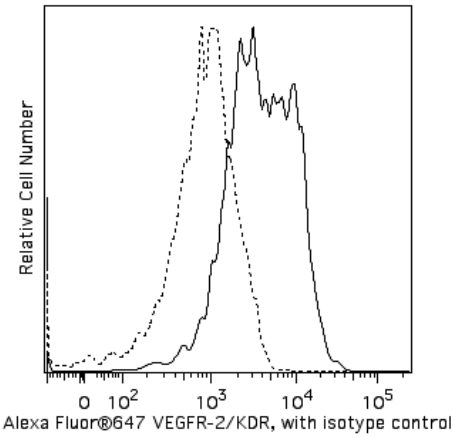
Alexa Fluor® 647 Mouse Anti-Human CD309 (VEGFR-2)

Product Information

Material Number:	**560871**
Alternate Name:	FLK1; Fetal liver kinase 1; KDR; VEGFR2; VEGF Receptor 2
Size:	25 Tests
Vol. per Test:	20 µl
Clone:	89106
Immunogen:	Human VEGFR-2
Isotype:	Mouse IgG1
Reactivity:	QC Testing: Human
Storage Buffer:	Aqueous buffered solution containing BSA and ≤0.09% sodium azide.

Description

The 89106 monoclonal antibody reacts with CD309 (vascular endothelial growth factor receptor-2 (VEGFR-2)), a receptor protein tyrosine kinase closely related to CD117 (c-kit) and CD140a (PDGF Receptor α chain) of the immunoglobulin superfamily. VEGFR-2, also known as fetal liver kinase 1 (Flk-1) or kinase insert domain receptor (KDR), 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 tissues. *In vivo* and *in vitro* studies indicate that VEGFR-2 is required for the embryonic development of vascular endothelial and hematopoietic cells. Human cardiac progenitor cells derived from human embryonic stem cells arise from a population of cells that express VEGFR-2.



Flow cytometric analysis of Alexa Fluor® 647 Mouse Anti-Human CD309 (VEGFR-2/KDR) on HUVEC cells. *HUVEC cells (Lonza, Cat. No. CC-2517) grown in EGM®-2 Endothelial Cell Growth Medium (Lonza, Cat No. CC-3162), which contains VEGF, were dissociated with Cell Dissociation Buffer (Life Technologies, Cat. No. 13151-014). The HUVEC cells were stained with either the Alexa Fluor® 647 Mouse Anti-Human CD309 (VEGFR-2/KDR) antibody (solid line) or a Alexa Fluor® 647 Mouse IgG1 k Isotype Control (Clone MOPC-21, Cat. No. 557714) (dotted line). Flow cytometry was performed on a BD™ LSR II flow cytometry system.*

Preparation and Storage

Store undiluted at 4°C and protected from prolonged exposure to light. Do not freeze.

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

The antibody was conjugated to Alexa Fluor® 647 under optimum conditions, and unreacted Alexa Fluor® 647 was removed.

Application Notes

Application

Flow cytometry	Routinely Tested

Suggested Companion Products

Catalog Number	Name	Size	Clone
557714	Alexa Fluor® 647 Mouse IgG1 κ Isotype Control	100 Tests	MOPC-21
560495	Alexa Fluor® 647 Mouse Anti-Human CD309 (VEGFR-2)	100 Tests	89106
554656	Stain Buffer (FBS)	500 mL	(none)

Product Notices

1. This reagent has been pre-diluted for use at the recommended Volume per Test. We typically use 1 × 10^6 cells in a 100-µl experimental sample (a test).
2. An isotype control should be used at the same concentration as the antibody of interest.
3. Alexa Fluor® is a registered trademark of Molecular Probes, Inc., Eugene, OR.

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4. The Alexa Fluor®, Pacific Blue™, and Cascade Blue® dye antibody conjugates in this product are sold under license from Molecular Probes, Inc. for research use only, excluding use in combination with microarrays, or as analyte specific reagents. The Alexa Fluor® dyes (except for Alexa Fluor® 430), Pacific Blue™ dye, and Cascade Blue® dye are covered by pending and issued patents.
5. Alexa Fluor® 647 fluorochrome emission is collected at the same instrument settings as for allophycocyanin (APC).
6. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
7. 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.
8. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.
9. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.

References

Farace F, Massard C, Borghi E, Bidart JM, Soria JC. Vascular disrupting therapy-induced mobilization of circulating endothelial progenitor cells. *Ann Oncol.* 2007; 18(8):1421-1422. (Clone-specific: Flow cytometry)

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