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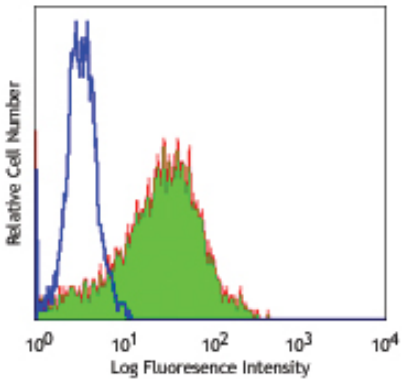
Product Data Sheet

Purified anti-human CD140a (PDGFRα)

Catalog # / Size: 323502 / 100 µg
Clone: 16A1
Isotype: Mouse IgG1, κ
Immunogen: NIH 3T3 cells transfected with human PDGFRalpha
Reactivity: Human
Preparation: The antibody was purified by affinity chromatography.
Formulation: Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.
Concentration: 0.5 mg/ml
Storage: The antibody solution should be stored undiluted at 4°C.



Human PDGFRA transfected cells stained with purified 16A1, followed by anti-mouse IgG FITC

Applications:

Applications: FC - *Quality tested*
IF - *Reported in the literature*

Recommended Usage: Each lot of this antibody is quality control tested by immunofluorescent staining with flow cytometric analysis. For immunofluorescent staining, the suggested use of this reagent is ≤ 0.5 µg per 106 cells in 100 µl volume. It is recommended that the reagent be titrated for optimal performance for each application.

Application References:
1. Miyazaki S et al. In:Leukocyte Typing VI Kishimoto et al. Eds, Garland Publishing Inc, New York 1998 pp 3-20.
2. Lottaz C, *et al.* 2010. *Cancer Res.* 70:2030. PubMed
3. Ricono JM, *et al.* 2009. *Am. J. Physiol. Renal Physiol.* 296:F406. (IF)

Description: The 16A1 monoclonal antibody recognizes human CD140a also known as the platelet-derived growth factor receptor, alpha polypeptide, PDGFR2, and PDGFRα. CD140a is a cell surface tyrosine kinase receptor for members of the platelet-derived growth factor family. The identity of the growth factor bound to the receptor determines whether the functional receptor is a homodimer or heterodimer composed of both PDGFR-α and -β. CD140a contains three immunoglobulin-like domains and a tyrosine kinase domain with a predicted molecular weight approximately 123 kD. CD140a is widely expressed on a variety of mesenchymal-derived cells and has been implicated in the development of some tumors including basal cell carcinoma and gastric stromal cell tumors. Binding of A-chain containing PDGF molecules as well as protease-activated PDGF-C molecules can stimulate cell proliferation. CD140a has been shown to interact with a number of proteins including CRK, Grb2, Grb14, SHP2, and others as integrin β3, caveolin-1, and nexin sorting molecules. The PDGFRα is heavily phosphorylated on numerous tyrosine residues through both autophosphorylation and ligand-dependent processes. The 16A1 antibody has been shown to be useful for flow cytometric detection of CD140a.

Antigen References:
1. Gronwald RG, *et al.* 1988. *Proc. Natl. Acad. Sci. USA* 85:3435.
2. Gilbertson DG, *et al.* 2001. *J. Biol. Chem.* 276:27406.
3. Seifert RA, *et al.* 1989. *J. Biol. Chem.* 264:8771.
4. Rupp E, *et al.* 1994. *Eur. J. Biochem.* 225:29.

Related Products:

Product	Clone	Application
Purified Mouse IgG1, κ Isotype Ctrl	MOPC-21	FC, ICFC, ICC, IF, IHC, IP, WB
APC Goat anti-mouse IgG (minimal x-reactivity)	Poly4053	FC
PE Goat anti-mouse IgG (minimal x-reactivity)	Poly4053	FC
Cell Staining Buffer		FC, ICC, ICFC

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