SONY

Product Data Sheet

Biotin anti-human CD140a (PDGFRα)

Catalog # / Size: 2217520 / 100 µg
2217515 / 25 µg

Clone: 16A1

Isotype: Mouse IgG1, κ

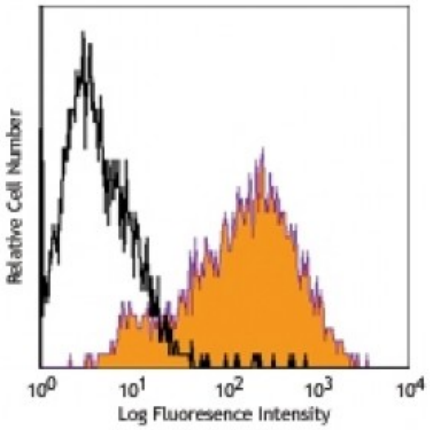
Immunogen: NIH 3T3 cells transfected with human PDGFRα

Reactivity: Human

Preparation: The antibody was purified by affinity chromatography, and conjugated with biotin under optimal conditions. The solution is free of unconjugated biotin.

Formulation: Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.

Concentration: 0.5



Human PDGFRA transfected cells stained with biotinylated 16A1, followed by Sav-PE

Applications:

Applications: Flow Cytometry

Recommended Usage: Each lot of this antibody is quality control tested by immunofluorescent staining with flow cytometric analysis. For flow cytometric staining, the suggested use of this reagent is ≤2.0 microg per million cells in 100 microL 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, α 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 of 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