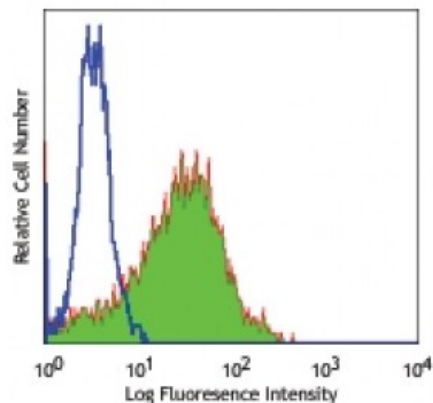


**Purified anti-human CD140a (PDGFR $\alpha$ )**

**Catalog # / Size:** 2217510 / 100  $\mu$ g  
**Clone:** 16A1  
**Isotype:** Mouse IgG1,  $\kappa$   
**Immunogen:** NIH 3T3 cells transfected with human PDGFR $\alpha$   
**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



Human PDGFR $\alpha$  transfected cells stained with purified 16A1, followed by anti-mouse IgG FITC

**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  $\leq 0.5$  microg per 10<sup>6</sup> cells in 100  $\mu$ L volume. It is recommended that the reagent be titrated for optimal performance for each application.

**Application References:** 1. Oeztuerk-Winder F, *et al.* 2012. *EMBO J.* 31:3431. [PubMed](#).

**Description:** The 16A1 monoclonal antibody recognizes human CD140a also known as the platelet-derived growth factor receptor,  $\alpha$  polypeptide, PDGFR2, and PDGFR $\alpha$ . 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- $\alpha$  and - $\beta$ . 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  $\beta$ 3, caveolin-1, and nexin sorting molecules. The PDGFR $\alpha$  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