

## APC anti-mouse CD140a Antibody

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|------------------------|---|
| <b>Catalog# / Size</b> | 135907 / 25 µg<br>135908 / 100 µg   |
| <b>Clone</b>           | APA5  |
| <b>Other Names</b>     | PDGF receptor- $\alpha$ , PDGFR- $\alpha$   |
| <b>Isotype</b>         | Rat IgG2a, $\kappa$   |
| <b>Description</b>     | Platelet-derived growth factor receptor- $\alpha$ (PDGFR- $\alpha$ ), CD140a, is one of two receptors for platelet-derived growth factors (PDGFs) and binds to all isoforms of PDGFs: PDGF-AA, PDGF-AB, and PDGF-BB. PDGFR $\alpha$ is a receptor tyrosine kinase that forms homodimers or heterodimers on the surface upon ligand binding and phosphorylates substrates. PDGFRs consist of either homodimers of $\alpha/\alpha$ , $\beta/\beta$ , or heterodimers of $\alpha/\beta$ . PDGF receptors, $\alpha$ and $\beta$ , are single glycoproteins with intracellular tyrosine kinase domain. Their ligand, PDGF, is a mitogen for connective tissue and glial cells. CD140a is expressed on embryonic tissues and mesenchymal-derived cells of adult mice. PDGF plays a role in wound healing and acts as a chemoattractant for fibroblasts, smooth muscle cells, glial cells, monocytes, and neutrophils. |

### Product Details

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| <b>Reactivity</b>             | Mouse  |
| <b>Antibody Type</b>          | Monoclonal   |
| <b>Host Species</b>           | Rat  |
| <b>Immunogen</b>              | Mouse PDGFR- $\alpha$ -hlgG1 recombinant fusion protein  |
| <b>Formulation</b>            | Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.  |
| <b>Preparation</b>            | The antibody was purified by affinity chromatography, and conjugated with APC under optimal conditions.  |
| <b>Concentration</b>          | 0.2 mg/ml  |
| <b>Storage &amp; Handling</b> | The antibody solution should be stored undiluted between 2°C and 8°C, and protected from prolonged exposure to light. <b>Do not freeze.</b>  |
| <b>Application</b>            | FC - Quality tested  |
| <b>Recommended Usage</b>      | Each lot of this antibody is quality control tested by <a href="#">immunofluorescent staining with flow cytometric analysis</a> . For flow cytometric staining, the suggested use of this reagent is $\leq 1.0$ µg per $10^6$ cells in 100 µl volume. It is recommended that the reagent be titrated for optimal performance for each application. |
| <b>Excitation Laser</b>       | Red Laser (633 nm)   |
| <b>Application Notes</b>      | Additional reported (for relevant formats) applications include: Western Blot, blocking function <sup>2</sup> , and immunohistochemical staining of paraffin and frozen sections. The LEAF™ purified antibody is recommended for functional assays.  |

#### Application References

(PubMed link indicates BioLegend citation)

1. Takakura N, et al. 1996. J. Invest. Dermatol. 107:770.
2. Liao C, et al. 2010. J. Clin. Invest. 120:242. (Block)
3. Chen H, et al. 2015. ASN Neuro 8:7. PubMed.
4. Miyawaki T, et al. 2004. J Neurosci. 24(37): 8124-34. (IHC-F)

#### Product Citations

1. Wang W, et al. 2014. Proc Natl Acad Sci U S A. 111:14466. PubMed
2. Singhal P, et al. 2016. Proc Natl Acad Sci U S A. 113: 122 - 127. PubMed
3. Chandrakanthan V, et al. 2016. Proc Natl Acad Sci U S A. 113: 2306-2315. PubMed
4. Corna G, et al. 2016. J Immunol. 197: 1914 - 1925. PubMed
5. Kurowska-Stolarska M, et al. 2016. J Allergy Clin Immunol. S0091-6749(16)31132-0. PubMed
6. Wang B, et al. 2017. Cell Discov. 10.1038/celldisc.2017.36. PubMed
7. Pinho AV, et al. 2018. Nat Commun. 9:5083. PubMed
8. Taguchi A, et al. 2017. Cell Stem Cell. 21:730. PubMed
9. Avraham S, et al. 2019. Oncogene. 38:3812. PubMed
10. Hogarth MW, et al. 2019. Nat Commun. 10:2430. PubMed
11. Jadhav U et al. 2017. Cell stem cell. 21(1):65-77 . PubMed
12. Hiebert P et al. 2018. Developmental cell. 46(2):145-161 . PubMed

RRID

AB\_2043969 (BioLegend Cat. No. 135907)  
AB\_2043970 (BioLegend Cat. No. 135908)

## Antigen Details

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|---------------------------|--|
| <b>Structure</b>          | Alpha chain of the platelet-derived growth factor receptor, a receptor tyrosine kinase that forms homo- or hetero-dimers on the surface after ligand binding.                          |
| <b>Distribution</b>       | Expressed on embryonic tissues and mesenchymal-derived cells of adult mouse.   |
| <b>Function</b>           | Play a role in wound healing and act as a chemoattractant for fibroblasts, smooth muscle cells, glial cells, monocytes and neutrophils.  |
| <b>Ligand/Receptor</b>    | PDGFs  |
| <b>Cell Type</b>          | Embryonic Stem Cells, Mesenchymal cells, Mesenchymal Stem Cells  |
| <b>Biology Area</b>       | Cell Biology, Immunology, Neuroscience, Neuroscience Cell Markers, Stem Cells  |
| <b>Molecular Family</b>   | CD Molecules, Cytokine/Chemokine Receptors   |
| <b>Antigen References</b> | 1. Mukoyama YS, et al. 2006. Proc Natl Acad Sci USA. 103(5):1551<br>2. Miyawaki T, et al. 2004. J Neurosci. 24(37):8124<br>3. Takakura N, et al. 1997. J Histochem Cytochem. 45(6):883 |
| <b>Gene ID</b>            | 18595  |

## Related Protocols

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[Cell Surface Flow Cytometry Staining Protocol](#)

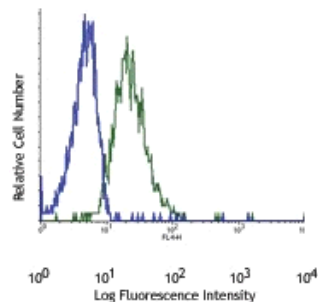
## Other Formats

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Purified anti-mouse CD140a, PE anti-mouse CD140a, Biotin anti-mouse CD140a, PerCP/Cyanine5.5 anti-mouse CD140a, PE/Cyanine7 anti-mouse CD140a, Brilliant Violet 605™ anti-mouse CD140a, TotalSeq™-A0573 anti-mouse CD140a, Brilliant Violet 421™ anti-mouse CD140a, PE/Cyanine5 anti-mouse CD140a, PE/Dazzle™ 594 anti-mouse CD140a, TotalSeq™-C0573 anti-mouse CD140a

## Product Data

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Mouse fibroblast NIH/3T3 cells stained with APA5 APC

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