Technical Data Sheet

InVivoMAb anti-mouse PDGFRα (CD140a)

Attention: Use of this product constitutes an agreement to Bio X Cell's Terms and Conditions which are included with this product in print and can also be found at https://bioxcell.com/terms-and-conditions.

Lot Specific Information

Lot Number: **Lot Specific***
Volume: **Lot Specific***
Concentration: **Lot Specific* (generally 4 to 11 mg/ml) ***
Total Protein: **Lot Specific***

*This information will be noted on the certificate of analysis that ships with this product.

Product Information

Catalog Number:	**BE0443**
Clone:	**APA5**
Isotype:	Rat IgG2a, κ
Recommended Isotype Control(s):	InVivoMAb rat IgG2a isotype control, anti-trinitrophenol
Recommended Dilution Buffer:	InVivoPure pH 7.0 Dilution Buffer
Immunogen:	Recombinant mPDGFRα-human IgG1 fusion protein
Reported Applications:	*in vivo* blocking of PDGFRα *in vitro* blocking of PDGFRα Functional assays Immunohistochemistry (paraffin) Immunohistochemistry (whole-mount) Flow cytometry Western blot ELISA
Formulation:	PBS, pH 7.0 Contains no stabilizers or preservatives
Endotoxin:	<2EU/mg (<0.002EU/μg) Determined by LAL gel clotting assay
Purity:	>95% Determined by SDS-PAGE
Sterility:	0.2 μm filtered
Production:	Purified from cell culture supernatant in an animal-free facility
Purification:	Protein G
RRID:	
Molecular Weight:	150 kDa

Description

The APA5 monoclonal antibody reacts with mouse PDGFRα (platelet-derived growth factor alpha), a subtype of the type III receptor tyrosine kinase PDGFR. This antibody does not bind PDGFRβ, c-Fms, Flk1, Flk2, or the IL-7 receptor. PDGFRα is involved in the embryonic regulation of organogenesis, including alveogenesis, hair morphogenesis, spermatogenesis, oligodendrogenesis, palate genesis, angiogenesis, and glomerulogenesis, and it regulates the processes of cellular proliferation, survival, and chemotaxis during wound healing. In mature organisms, PDGFRα is expressed in several interstitial-type cells, such as the fibroblasts of the heart, lungs, and dermis, as well as in hepatic stellate cells and renal mesangial cells. PDGFRα is considered a general marker for fibroblasts and mesenchymal cells and a useful identifier of progenitor cell populations across multiple mesodermal tissues. PDGFRα is involved in platelet activation, the secretion of agonists from platelet granules, and thrombin-induced platelet aggregation. At the molecular level, PDGFRα acts as a cell-surface receptor for its cognate ligands, PDGF-AA, PDGF-BB, and PDGF-CC, whereas PDGFRβ binds PDGF-DD.

PDGFRα dimerizes in response to ligand binding, forming PDGFRα-PDGFRα homodimers and PDGFRα-PDGFRβ heterodimers. In vivo mouse knockout phenotype data have suggested that the binding of PDGFRα to its ligands PDGF-AA and PDGF-CC solely activates PDGFRα signaling during development, while PDGFRα binding with PDGF-BB activates PDGFRβ signaling. PDGFRα phosphorylates PIK3R1, PLCG1, and PTPN11, and it is involved in AKT, MAPK, and STAT signaling pathways.

Storage

Store at the stock concentration at 4°C. **Do not freeze.**
It is not uncommon for a floccule or precipitate to appear during storage. The floccule is typically buffer salts precipitating out of solution or a small bit of protein aggregation. For information on how to remove floccules or precipitates see our FAQ's at https://bioxcell.com/faqs.

Protocol Information

Since applications vary, each investigator should use the application references as a guide to help estimate the appropriate dose or concentration. The dose or concentration can be further optimized experimentally in a dose response or titration experiment.

Application References

For a complete list of references, visit https://bioxcell.com/catalogsearch/result/?q=BE0443#tab_references or scan the QR code below.

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