abcam

ab51869

Anti-PDGF B antibody [MM0014-5F66] - BSA and Azide free

Key facts

Isotype	IgG1
Host species	Mouse
Storage buffer	Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	Recombinant Full Length Protein corresponding to Human PDGFB. Database link P01127
Carrier free	Yes
Clone number	MM0014-5F66
Purification technique	Affinity purification Protein G
Concentration	0.2 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

Flow Cyt

Tested

Species	Human
Dilution info	1 µg for 10^6 Cells

Notes	ab170190 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.

WB

Tested

Species	Human
Dilution info	1/1000
Notes	-

IHC-P

Tested

Species	Human
Dilution info	1/50 - 1/200
Notes	Perform enzymatic antigen retrieval before commencing with IHC staining protocol.

Target data

See full target information PDGFB

Function	Growth factor that plays an essential role in the regulation of embryonic development, cell proliferation, cell migration, survival and chemotaxis. Potent mitogen for cells of mesenchymal origin (PubMed:26599395). Required for normal proliferation and recruitment of pericytes and vascular smooth muscle cells in the central nervous system, skin, lung, heart and placenta. Required for normal blood vessel development, and for normal development of kidney glomeruli. Plays an important role in wound healing. Signaling is modulated by the formation of heterodimers with PDGFA (By similarity).

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C

Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	PDGF-B also known as platelet-derived growth factor subunit B or PDGF-BB is a critical protein involved in various cellular processes. Composed of 241 amino acids PDGF-B exhibits a molecular mass of approximately 27 kDa. Scientists recognize this protein for its expression primarily in platelets but it also appears in a range of other tissues including smooth muscle cells and fibroblasts. The PDGF-B protein plays a substantial role in the regulation of growth and division inducing pathways important for cellular proliferation.
Biological function summary	PDGF-B influences cellular signaling processes and facilitates interactions that are a part of the PDGF receptor system. PDGF-B can form a homo-dimerization commonly known as the PDGF-BB dimer which is an active form. When PDGF-B binds to its receptor specifically the PDGF receptor β (PDGFR-β) it triggers pathways that control various cellular activities including growth and survival. The interaction of PDGF-B with the receptor is an important step that modulates several downstream signaling pathways.
Pathways	PDGF-B activates significant pathways such as the MAPK/ERK and PI3K/AKT pathways. These pathways play a major role in the regulation of cell proliferation and differentiation. Through these pathways PDGF-B exhibits interactions with proteins like Ras and Akt which are integral in transmitting signals within the cell. These cascades result in the promotion of processes such as angiogenesis and wound healing highlighting the importance of PDGF-B in cellular function.
Associated diseases and disorders	Researchers have linked PDGF-B to pathologies such as cancer and atherosclerosis. For instance overexpression of PDGF-B can lead to abnormal vascular growth contributing to tumor development in cancers. It also plays a role in the progression of atherosclerosis by promoting the migration and proliferation of smooth muscle cells leading to plaque formation. In these contexts PDGF-B shows interaction with other proteins such as VEGF in tumor angiogenesis and LDL in atherosclerotic developments reinforcing its involvement in these conditions.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

We do not recommend this combination. It is not covered by our product promise.

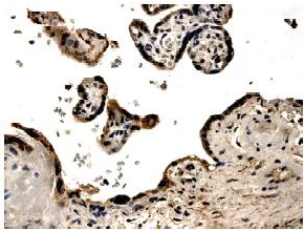
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In the unlikely event of one of our products not working as expected, you are covered by our product promise.

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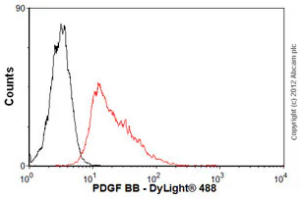
3 product images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PDGF B antibody [MM0014-5F66] - BSA and Azide free (ab51869)

PDGF B Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using mouse Anti-PDGF B antibody

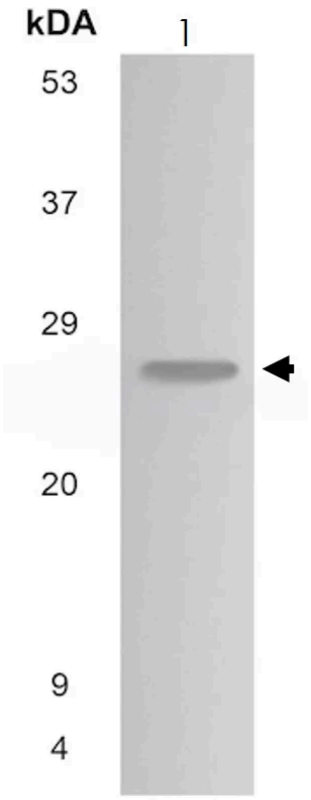
ab51869 at 1/200 dilution, staining PDGF BB in human placental tissue section by Immunohistochemistry (Formalin/PFA fixed paraffin-embedded sections).
Antigen retrieval was done using proteinase K (20 µg/mL in PBS: Room temperature, ranging from 5 min to 30 mins).



Flow Cytometry - Anti-PDGF B antibody [MM0014-5F66] - BSA and Azide free (ab51869)

PDGF B Flow Cytometry staining using mouse Anti-PDGF B antibody

Overlay histogram showing SHSY-5Y cells stained with ab51869 (red line). The cells were fixed with 4% paraformaldehyde (10 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab51869, 1µg/1x10^6 cells) for 30 min at 22°C. The secondary antibody used was DyLight® 488 goat anti-mouse IgG (H+L) (ab96879) at 1/500 dilution for 30 min at 22°C. Isotype control antibody (black line) was mouse IgG1 [ICIGG1] (ab91353, 2µg/1x10^6 cells) used under the same conditions. Acquisition of >5,000 events was performed. This antibody gave a positive signal in SHSY-5Y cells fixed with 80% methanol (5 min)/permeabilized with 0.1% PBS-Tween for 20 min used under the same conditions.



Western blot - Anti-PDGF B antibody [MM0014-5F66] - BSA and Azide free (ab51869)

PDGF B Western blot staining of Human placenta tissue lysate using mouse Anti-PDGF B antibody

All lanes:
Western blot - Anti-PDGF B antibody [MM0014-5F66] - BSA and Azide free (ab51869) at 1/1000 dilution

All lanes:
Human placenta tissue lysate

Predicted band size: 27 kDa

Observed band size: 27 kDa

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.