abcam

ab234278

APC Anti-DEP1 antibody [MEM-CD148/05]

Anti-DEP1 antibody [MEM-CD148/05] conjugated to APC - suitable for flow cytometry, and reacts with human samples. Clone [MEM-CD148/05] is a mouse monoclonal antibody.

Design your panel with our interactive flow cytometry panel builder. Click here.

Key facts

Isotype	IgG2b
Host species	Mouse
Conjugation	APC
Excitation/Emission	Ex: 650nm, Em: 660nm
Storage buffer	pH: 7.4 Preservative: 0.0975% Sodium azide Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	Recombinant Fragment Protein within Human PTPRJ aa 1-450. The exact immunogen used to generate this antibody is proprietary information. Database link Q12913
Clone number	MEM-CD148/05
Purification technique	Size-exclusion chromatography
Purification notes	ab234278 is conjugated with cross-linked Allophycocyanin (APC) under optimum conditions. The conjugate is purified by size-exclusion chromatography and adjusted for direct use.

Reactivity data

Flow Cyt

Tested

Species	Human
Dilution info	10 µL for 10^6 Cells
Notes	-

Target data

See full target information PTPRJ

Function	Tyrosine phosphatase which dephosphorylates or contributes to the dephosphorylation of CTNND1, FLT3, PDGFRB, MET, KDR, LYN, SRC, MAPK1, MAPK3, EGFR, TJP1, OCLN, PIK3R1 and PIK3R2 (PubMed:10821867, PubMed:12062403, PubMed:12370829, PubMed:12475979, PubMed:18348712, PubMed:19494114, PubMed:19922411, PubMed:21262971). Plays a role in cell adhesion, migration, proliferation and differentiation (PubMed:12370829, PubMed:14709717, PubMed:16682945, PubMed:19836242). Has a role in megakaryocytes and platelet formation (PubMed:30591527). Involved in vascular development (By similarity). Regulator of macrophage adhesion and spreading (By similarity). Positively affects cell-matrix adhesion (By similarity). Positive regulator of platelet activation and thrombosis. Negative regulator of cell proliferation (PubMed:16682945). Negative regulator of PDGF-stimulated cell migration; through dephosphorylation of PDGFR (PubMed:21091576). Positive regulator of endothelial cell survival, as well as of VEGF-induced SRC and AKT activation; through KDR dephosphorylation (PubMed:18936167). Negative regulator of EGFR signaling pathway; through EGFR dephosphorylation (PubMed:19836242). Enhances the barrier function of epithelial junctions during reassembly (PubMed:19332538). Negatively regulates T-cell receptor (TCR) signaling (PubMed:11259588, PubMed:9531590, PubMed:9780142). Upon T-cell TCR activation, it is up-regulated and excluded from the immunological synapses, while upon T-cell-antigen presenting cells (APC) disengagement, it is no longer excluded and can dephosphorylate PLCG1 and LAT to down-regulate prolongation of signaling (PubMed:11259588, PubMed:12913111). Isoform 2. Activates angiogenesis and cell migration (PubMed:28052032). Downregulates the expression of the endothelial adhesion molecules ICAM1 and VCAM1 (PubMed:28052032).

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C
Storage information	Do Not Freeze, Store in the dark

Supplementary info

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

Activity summary	DEP1 also known as protein tyrosine phosphatase receptor type J (PTPRJ) is an important regulator in cell signaling. Its molecular mass is approximately 135-150 kDa. DEP1 is a transmembrane protein expressed in many tissues like epithelial cells endothelial cells and hematopoietic cells. It functions as a protein tyrosine phosphatase meaning it removes phosphate groups from tyrosine residues on target proteins which impacts many cellular processes.
Biological function summary	DEP1 acts as a negative regulator of cell proliferation differentiation and migration. It plays a role in maintaining cellular homeostasis and is often found in complex with other signaling molecules at cell-cell junctions. DEP1 modulates signaling pathways by dephosphorylating receptor tyrosine kinases or their downstream targets. This regulation impacts how cells respond to external stimuli and maintain normal physiological activities.
Pathways	DEP1 is active in both the RAS/MAPK signaling pathway and the PI3K/AKT pathway. It interacts with signaling molecules such as epidermal growth factor receptor (EGFR) and vascular endothelial growth factor receptor (VEGFR) impacting their signaling abilities. By dephosphorylating these receptors DEP1 modulates the pathways that control cell growth and survival influencing how cells react to growth factors and other signals.
Associated diseases and disorders	DEP1 connects to several cancers and cardiovascular diseases. It often acts as a tumor suppressor by inhibiting signaling pathways that promote uncontrolled cell growth. In cancer altered DEP1 expression or function can lead to changes in cellular behaviors contributing to tumorigenesis. It relates to proteins like VEGFR in these contexts as their dysregulation can lead to abnormal vascularization in tumors and in cardiovascular disease affecting angiogenesis and blood vessel integrity.

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

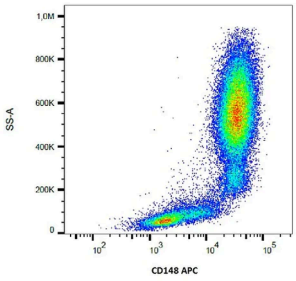
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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

Full details and terms and conditions can be found here:
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1 product image



Flow Cytometry - APC Anti-DEP1 antibody [MEM-CD148/05] (ab234278)

DEP1 Flow Cytometry staining using mouse Anti-DEP1 antibody

Flow cytometric analysis of human peripheral blood labeling DEP1 using ab234278 at 10 µl/10^6 cells. Surface staining.

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