abcam

ab21885

FITC Anti-CD48 antibody [MEM-102]

Anti-CD48 antibody [MEM-102] conjugated to FITC - suitable for flow cytometry, and reacts with human samples. Clone [MEM-102] is a mouse monoclonal antibody cited in 2 publications.

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Key facts

Isotype	IgG1
Host species	Mouse
Conjugation	FITC
Excitation/Emission	Ex: 495nm, Em: 519nm
Storage buffer	pH: 7.4 Preservative: 0.097% Sodium azide Constituents: BSA, PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	Cell preparation containing CD48 protein. The exact immunogen used to generate this antibody is proprietary information. Database link P09326
Clone number	MEM-102
Purification technique	Affinity purification Protein G

Reactivity data

Flow Cyt

Tested

Species	Human
Dilution info	-

Notes	Use 20µl per 100µl whole blood.

Predicted

Species	Primates
Dilution info	-
Notes	-

Target data

See full target information CD48

Function

Glycosylphosphatidylinositol (GPI)-anchored cell surface glycoprotein that interacts via its N-terminal immunoglobulin domain with cell surface receptors including CD244/2B4 or CD2 to regulate immune cell function and activation (PubMed:12007789, PubMed:19494291, PubMed:27249817, PubMed:9841922). Participates in T-cell signaling transduction by associating with CD2 and efficiently bringing the Src family protein kinase LCK and LAT to the TCR/CD3 complex (PubMed:19494291). In turn, promotes LCK phosphorylation and subsequent activation (PubMed:12007789). Induces the phosphorylation of the cytoplasmic immunoreceptortyrosine switch motifs (ITSMs) of CD244 initiating a series of signaling events that leads to the generation of the immunological synapse and the directed release of cytolytic granules containing perforin and granzymes by T-lymphocytes and NK-cells (PubMed:27249817).

Storage

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

Notes

The purified antibody is conjugated with Fluorescein isothiocyanate (FITC) under optimum conditions. The reagent is free of unconjugated FITC and adjusted for direct use.

Supplementary info

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

Activity summary	CD48 also known as SLAMF2 or B-lymphocyte activation marker BLAST-1 is a glycosylphosphatidylinositol (GPI)-anchored protein with a molecular mass approximately 45-70 kDa depending on glycosylation. It is expressed on the surface of various immune cells like T cells B cells and natural killer (NK) cells. CD48 does not possess an intracellular signaling domain but engages in extracellular interactions with other proteins affecting immune cell activities.
Biological function summary	CD48 serves as a co-stimulatory molecule involved in immune response modulation. It interacts with 2B4 (CD244) a member of the signaling lymphocyte activation molecule (SLAM) family to form a receptor-ligand complex. This interaction can result in enhanced T cell and NK cell responses. CD48's presence on activated hematopoietic and non-hematopoietic cells highlights its role in cell-to-cell communication.
Pathways	CD48 participates in SLAM family receptor signaling and natural killer cell-mediated cytotoxicity. In the SLAM pathway CD48 enhances communication and regulation between T cells and NK cells. This communication also relates to the roles of CD244 linking it to downstream signaling pathways that influence immune cell function. These pathways illustrate the critical network CD48 is part of which impacts various immune responses.
Associated diseases and disorders	CD48 is involved in autoimmune conditions like rheumatoid arthritis and immunological cancers such as lymphoma. In rheumatoid arthritis CD48 along with CD244 modulates immune responses which can exacerbate inflammation. In lymphoma abnormal CD48 expression can contribute to tumor progression and immune evasion indicating its potential as a therapeutic target.

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

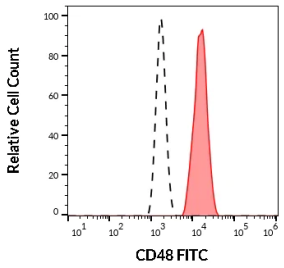
We do not recommend this combination. It is not covered by our product promise.

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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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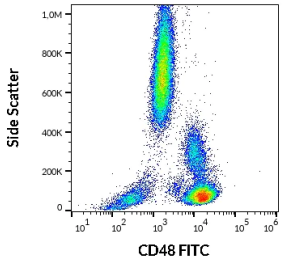
2 product images



Flow Cytometry - FITC Anti-CD48 antibody [MEM-102] (ab21885)

CD48 Flow Cytometry staining using mouse Anti-CD48 antibody

Flow cytometry analysis (surface staining) of human peripheral whole blood stained using Anti-CD48 antibody [MEM-102] (ab21885) (20 µL reagent/100 µL of peripheral whole blood). CD48 positive lymphocytes (red-filled). CD48 negative neutrophil granulocytes (black-dashed).



Flow Cytometry - FITC Anti-CD48 antibody [MEM-102] (ab21885)

CD48 Flow Cytometry staining using mouse Anti-CD48 antibody

Flow cytometry surface staining pattern of human peripheral whole blood stained using anti-CD48 antibody [MEM-102] (ab21885) at 20 µL/100 µL of peripheral whole blood.

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