abcam

ab185759

Anti-CD48 antibody [156-4H9] - Low endotoxin, Azide free

Key facts

Isotype	IgG1
Host species	Mouse
Storage buffer	pH: 7.2
Form	Liquid
Clonality	Monoclonal
Carrier free	Yes
Clone number	156-4H9
Purification technique	Affinity purification Protein G
Concentration	1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

Flow Cyt

Expected

Species	Human
Dilution info	-
Notes	In 100ul volume. ab170190 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.

FuncS

Expected

Species	Human
Dilution info	Use at an assay dependent concentration.
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 duration	1-2 weeks
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

Notes

Endotoxin Level: Less than 0.001 ng/μg antibody, as determined by the LAL assay.

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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