abcam

ab14125

Anti-CD45RC antibody [MIL15]

Key facts

Isotype	IgM
Host species	Mouse
Storage buffer	pH: 7.4 Preservative: 0.09% Sodium azide Constituents: Tissue culture supernatant, 10% Fetal calf serum, 1.72% Tris HCl
Form	Liquid
Clonality	Monoclonal
Clone number	MIL15
Purity	Tissue culture supernatant

Reactivity data

Flow Cyt

Tested

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

Target data

See full target information CD45

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

Supplementary info

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

Activity summary	CD45RC also known as PTPRC isoform 14125 or CD45 plays an essential mechanical role as a protein tyrosine phosphatase. This approximately 180-240 kDa transmembrane protein modulates antigen receptor signaling in lymphocytes. CD45RC is expressed on various immune cells including T cells B cells and natural killer cells with expression levels varying between subsets of these cells. The CD45RC isoform arises from alternative splicing leading to different molecular forms that can affect immune cell signaling.
Biological function summary	CD45RC impacts cell signaling by regulating the threshold of activation in T and B cells. It is a member of the receptor-type protein tyrosine phosphatase family and functions to maintain immune homeostasis. CD45RC does not typically function alone; it interacts with other cell surface molecules to facilitate signal transduction. By dephosphorylating specific kinases it fine-tunes the immune response preventing overreaction and facilitating a rapid appropriate response to antigens.
Pathways	CD45RC modulates pathways involved in lymphocyte activation. One key pathway is the T-cell receptor signaling pathway where it controls the activity of Src family kinases which play a significant part in the early activation of T cells. Another important pathway is the B-cell receptor signaling pathway. CD45RC's action with the BCR complex ensures precise regulation of B cell responses. Its activity is closely related to proteins such as Lck and Fyn which are involved in the signaling cascades initiated by receptor engagement.
Associated diseases and disorders	CD45RC has implications in autoimmune diseases and certain leukemias. Its altered expression or function can lead to improper immune system regulation which may contribute to autoimmune conditions like rheumatoid arthritis where an overactive immune response targets the body’s own tissues. In some leukemias aberrant CD45RC expression can affect leukemia progression by modulating leukemia cell signaling and interactions within the bone marrow niche. This relationship of CD45RC with disease-related proteins like Lck highlights its potential as a therapeutic target in conditions of immune dysregulation.

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

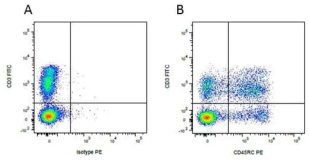
We do not recommend this combination. It is not covered by our product promise.

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1 product image



Flow Cytometry - Anti-CD45RC antibody [MIL15] (ab14125)

CD45RC Flow Cytometry staining using mouse Anti-CD45RC antibody

Figure A. FITC conjugated mouse anti porcine CD3 and purified mouse IgM isotype control detected with goat anti mouse IgM PE.
Figure B. FITC conjugated mouse anti porcine CD3 and purified mouse Anti-CD45RC antibody [MIL15] (ab14125) detected with goat anti mouse IgM.

All experiments performed on red cell lysed porcine blood gated on mononuclear cells.

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