abcam

ab233585

PE/Cy7® Anti-IL3RA/CD123 antibody [6H6]

Anti-IL3RA/CD123 antibody [6H6] conjugated to PE/Cy7® - suitable for flow cytometry, and reacts with human samples. Clone [6H6] is a mouse monoclonal antibody and one of the most commonly used clones for flow cytometry.

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

Key facts

Isotype	IgG1
Host species	Mouse
Conjugation	PE/Cy7®
Excitation/Emission	Ex: 565nm, Em: 778nm
Storage buffer	pH: 7.4 Preservative: 0.1% Sodium azide Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	Cell preparation containing IL3RA protein. The exact immunogen used to generate this antibody is proprietary information. Database link P26951
Clone number	6H6
Purification technique	Size-exclusion chromatography

Reactivity data

Flow Cyt

Tested

Species	Human
Dilution info	4 µL for 10^6 Cells

Notes	-

Target data

See full target information IL3RA

Function	Cell surface receptor for IL3 expressed on hematopoietic progenitor cells, monocytes and B-lymphocytes that controls the production and differentiation of hematopoietic progenitor cells into lineage-restricted cells (PubMed:10527461). Ligand stimulation rapidly induces hetrodimerization with IL3RB, phosphorylation and enzyme activity of effector proteins such as JAK2 and PI3K that play a role in signaling cell proliferation and differentiation. Activation of JAK2 leads to STAT5-mediated transcriptional program (By similarity).

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C
Storage information	Store in the dark

Supplementary info

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

Activity summary	IL3RA also known as CD123 or interleukin-3 receptor alpha chain is a transmembrane protein with a molecular weight of approximately 70-80 kDa. This protein frequently expresses on the surface of hematopoietic cells particularly those of myeloid lineage including mast cells and basophils. Researchers use CD123 as a marker for identifying certain cell types in flow cytometry. Antibodies such as anti-CD123 are available for various applications including identifying these cells in research and clinical settings.
Biological function summary	IL3RA forms part of a heterodimeric receptor complex binding with the beta-common (βc) chain to create the high-affinity IL-3 receptor. This complex plays a role in mediating the effects of interleukin-3 a cytokine that promotes the growth and differentiation of pluripotent hematopoietic stem cells. Through this mechanism the receptor influences immune response modulation particularly in allergic reactions and inflammation.
Pathways	IL3RA interacts with the JAK/STAT pathway which is essential for signal transduction and transcription activation in response to IL-3 binding. This pathway

	involves proteins like Janus kinase 2 (JAK2) and Signal Transducer and Activator of Transcription 5 (STAT5) which transmit signals from IL3RA engagement to the cell nucleus promoting gene expression associated with cell proliferation and survival.
Associated diseases and disorders	IL3RA expression relates closely to certain hematological conditions such as acute myeloid leukemia (AML) and systemic mastocytosis. In AML increased expression of CD123 marks leukemic cells making it a target for therapeutic intervention. The interaction of IL3RA with FLT3 another tyrosine kinase is of particular interest in these disorders as both proteins contribute to the proliferation of malignant cells through related signaling pathways.

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

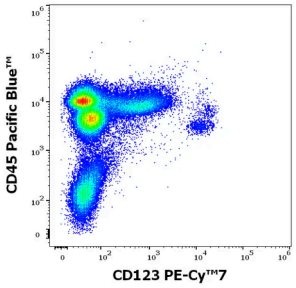
We do not recommend this combination. It is not covered by our product promise.

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:
Terms & Conditions.

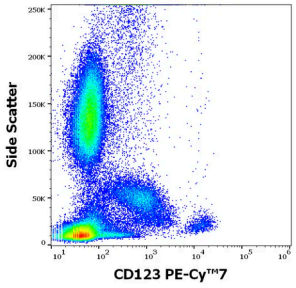
3 product images



Flow Cytometry - PE/Cy7® Anti-IL3RA/CD123 antibody [6H6] (ab233585)

IL3RA/CD123 Flow Cytometry staining of Human peripheral whole blood using mouse Anti-IL3RA/CD123 antibody

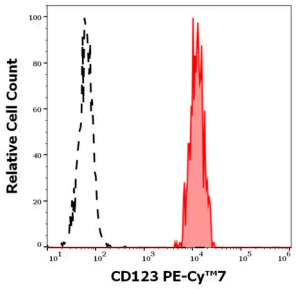
Flow cytometry multicolor surface staining pattern of human peripheral whole blood using anti-human CD123 (6H6) PE-Cy™7 antibody (concentration in sample 0.33 µg/ml) and anti-human CD45 (2D1) Pacific Blue™ antibody (10 µl reagent / 100 µl of peripheral whole blood).



Flow Cytometry - PE/Cy7® Anti-IL3RA/CD123 antibody [6H6] (ab233585)

IL3RA/CD123 Flow Cytometry staining of Human peripheral whole blood using mouse Anti-IL3RA/CD123 antibody

Flow cytometry surface staining pattern of human peripheral whole blood stained using anti-human CD123 (6H6) PE-Cy™7 antibody (concentration in sample 0.33 µg/ml).



Flow Cytometry - PE/Cy7® Anti-IL3RA/CD123 antibody [6H6] (ab233585)

IL3RA/CD123 Flow Cytometry staining of Human peripheral whole blood using mouse Anti-IL3RA/CD123 antibody

Separation of human CD123 positive CD45dim basophil granulocytes (red-filled) from neutrophil granulocytes (black-dashed) in flow cytometry analysis (surface staining) of human peripheral whole blood stained using anti-human CD123 (6H6) PE-Cy™7 antibody (concentration in sample 0.33 µg/ml).

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