abcam

ab281781

PE Anti-IL3RA/CD123 antibody [EPR24481-20]

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Conjugation	PE
Excitation/Emission	Ex: 480;565nm, Em: 578nm
Storage buffer	pH: 7.4 Preservative: 0.02% Sodium azide Constituents: PBS, 1% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR24481-20
Purification technique	Affinity purification Protein A
Concentration	0.5 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

Flow Cyt

Tested

Species	Human
Dilution info	-

Notes	-

ICC/IF

Expected

Species	Human
Dilution info	Use at an assay dependent concentration.
Notes	-

IHC-P

Expected

Species	Human
Dilution info	Use at an assay dependent concentration.
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 duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C

Aliquoting information	Upon delivery aliquot
Storage information	Store in the dark

Notes

Patented technology
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?
This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

Want a custom formulation?
This antibody clone is manufactured by Abcam. If you require a custom buffer formulation or conjugation for your experiments, please contact orders@abcam.com

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

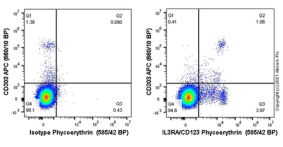
We do not recommend this combination. It is not covered by our product promise.

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.

1 product image



Flow Cytometry - PE Anti-IL3RA/CD123 antibody [EPR24481-20] (ab281781)

IL3RA/CD123 Flow Cytometry staining using rabbit Anti-IL3RA/CD123 antibody

Flow cytometry staining of human peripheral blood mononuclear cells (PBMCs) with ab281781 (right) or Rabbit IgG (monoclonal) Phycoerythrin (ab209478) isotype (left). PBMCs were incubated for 30 min on ice in 1x PBS containing 10 g/ml human IgG and 10 % normal goat serum to block FC receptors and non-specific protein-protein interaction followed by the antibody (ab281781) or Rabbit IgG (monoclonal) Phycoerythrin (ab209478) isotype 100 µg/ml at 0.008 µg/ml (1/62500)) for 30 min on ice. The cells were simultaneously stained with CD303.
Acquisition of >30000 events were collected using a 50 mW Yellow/Green laser (561nm) and 585/42 bandpass filter. Events were gated on live lymphocytes.

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