abcam

**ab21562**

# Anti-IL3RA/CD123 antibody [6H6]

## Key facts

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| **Isotype** | IgG1 |
| **Host species** | Mouse |
| **Storage buffer** | pH: 7.2 Preservative: 0.09% 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** | Affinity purification Protein G |
| **Light chain type** | kappa |
| **Concentration** | 0.5 mg/mL The concentration of this product may be batch-dependent<br>Batch concentration finder → |

## Reactivity data

## Flow Cyt

### Tested

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| **Species** | Human |
| **Dilution info** | 1 µg for $10^6$ Cells |

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| **Notes** | 100 µl volume or 100 µl of whole blood.<br>ab170190 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody. |

## Target data

See full target information IL3RA

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| **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

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| **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 |
| **Storage information** | Avoid freeze / thaw cycle |

## Supplementary info

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

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| **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 |

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| | 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**

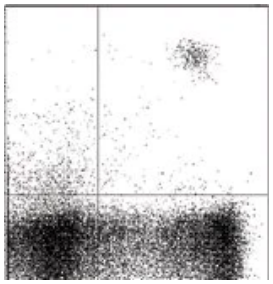
We do not recommend this combination. It is not covered by our product promise.

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.

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## 1 product image



## Flow Cytometry - Anti-IL3RA/CD123 antibody [6H6] (ab21562)

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

Human peripheral blood lymphocytes stained with ab21562 (y-axis) and CD45RO PE/Cy5® (x-axis)

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