

Mouse anti-Human CD123 Antibody | anti-CD123 antibody

Anti-CD123 [7G3], Mouse IgG2a

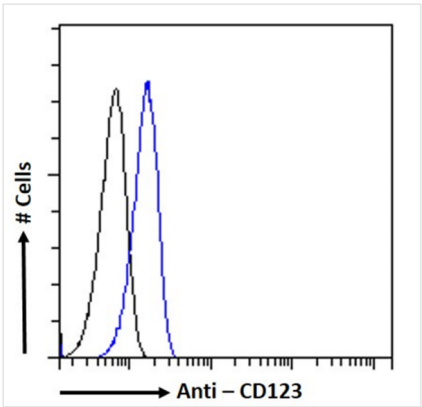
CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA72280	Mouse	Human	Flow Cytometry, Functional Assay, Western Blot, Immunoprecipitation, Flow Cytometry, Functional Assay

PRODUCT SYNONYMS

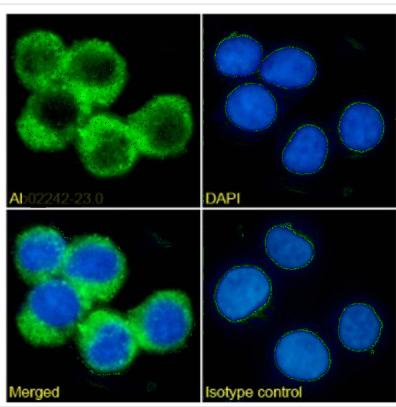
CD123; Anti-CD123 [7G3]; Mouse IgG2a; IL3RA; IL-3RA; IL-3R-alpha; Interleukin-3 receptor subunit alpha; IL-3 receptor subunit alpha; IL-3R subunit alpha; anti-CD123 antibody

PRODUCT SPECIFICATIONS

Host	Mouse
Reactivity	Human
Isotype	Mouse IgG2a, Kappa
Clone Number	7G3
Specificity	This antibody specifically binds to the IL-3R alpha-chain and completely abolishes its function. IL-3R is expressed on myeloid, lymphoid, and vascular endothelial cells, where it transduces IL-3-dependent signals leading to cell activation.
Purity/Purification	Protein A affinity purified
Form/Format	PBS with 0.02% Proclin 300.
Concentration	1mg/ml (varies by lot)
Applicable Applications for anti-CD123 antibody	Blocking, FCM/FACS (Flow Cytometry), WB (Western Blot), IP (Immunoprecipitation), FCM/FACS (Flow Cytometry)
Immunogen	The original antibody was generated by intraperitoneally immunizing BALB/c mice with 5 X 10 ⁶ COS cells transfected with the IL-3R a-chain in combination with adjuvant peptides.
Preparation and Storage	Store at 4 degree C for up to 3 months. For longer storage, aliquot and store at -20 degree C.



FCM/FACS (Flow Cytometry)
Flow cytometry using the Anti-CD123 antibody 7G3 (AAA72280). Paraformaldehyde fixed U937 cells permeabilized with 0.5% Triton were stained with anti-unknown specificity antibody or the rabbit IgG version of 7G3 (AAA72280-23.0, blue line) at a dilution of 1:100 for 1h at RT. After washing, the bound antibody was detected using a goat anti-rabbit IgG AlexaFluor 488 antibody at a dilution of 1:1000 and cells analyzed using a FACSCanto flow-cytometer.



IF (Immunofluorescence)
Immunofluorescence staining of U937 cells with anti-CD123 (AAA72280) 7G3. Immunofluorescence analysis of paraformaldehyde fixed U937 cells on Shi-fix coverslips stained with the chimeric rabbit IgG version of 7G3 (AAA72280-23.0) at 10 ug/ml for 1h followed by Alexa Fluor 488 secondary antibody (2 ug/ml), showing membrane staining. The nuclear stain is DAPI (blue). Panels show from left-right, top-bottom AAA72280-23.0, DAPI, merged channels and an isotype control. The isotype control was an unknown specificity antibody followed by staining with Alexa Fluor 488 secondary antibody.

ADDITIONAL INFORMATION

Related Product Information for anti-CD123 antibody	This antagonist antibody binds IL-3Ralpha and blocks IL-3 binding and IL-3-mediated functions. mAb 7G3 immunoprecipitated and recognized in western blots the IL-3R alpha chain expressed by transfected cells and bound to primary cells expressing IL-3Ralpha. The expression of IL-3Ralpha chain on various cells types was analysed by flow cytometry using this antibody (PMID: 8547680). It is reported that 7G3 inhibits IL-3Ralpha and betac dimerization (PMID: 8649415). This antibody was used in the study of neutrophils expressing IL-3 receptors which are activated by granulocyte-macrophage colony-stimulating factor or GM-CSF (PMID: 7579364). The original 7G3, mouse IgG2a antibody inhibited IL-3-mediated intracellular signaling of isolated acute myeloid leukemia (AML) CD34+ CD38- cells in vitro and reduced their survival (PMID: 19570512). Humanized version of this antibody CSL362 is available on request. CSL362, retains the ability to neutralise IL-3 and has enhanced affinity for the FcgammaRIIIa (CD16) on NK cells. In vitro studies have demonstrated that the increased affinity for CD16 correlates with greater antibody-dependent cell-mediated cytotoxicity (ADCC) against CD123 expressing cell lines (Busfield et al., 2012). CSL362 is being accessed for use in the treatment of myeloid leukemia (PMID: 24363400, 2524888, 26130514).
Product Categories/Family for anti-CD123 antibody	Cell signalling; cell activation; cancer; oncology
References	Sun et al. Monoclonal antibody 7G3 recognizes the N-terminal domain of the human interleukin-3 (IL-3) receptor alpha-chain and functions as a specific IL-3 receptor antagonist. Blood. (1996); 87(1):83-92. PMID:8547680

NCBI AND UNIPROT INFORMATION

NCBI GI #	417184
NCBI GeneID	3563
UniProt Accession #	P26951; Q5HYQ7; Q5HYQ8; Q9UEH7; A8K3F3; B9VI81
Molecular Weight	34,466 Da
NCBI Official Full Name	Interleukin-3 receptor subunit alpha
NCBI Official Synonym Full Names	interleukin 3 receptor, alpha (low affinity)
NCBI Official Symbol	IL3RA
NCBI Official Synonym Symbols	IL3R; CD123; IL3RX; IL3RY; IL3RAY; hIL-3Ra

NCBI Protein Information	interleukin-3 receptor subunit alpha; IL-3RA; IL-3R-alpha; CD123 antigen; IL-3R subunit alpha; IL-3 receptor subunit alpha; IL-3 receptor alpha SP2 isoform
UniProt Protein Name	Interleukin-3 receptor subunit alpha
UniProt Gene Name	IL3RA
UniProt Synonym Gene Names	IL3R; IL-3 receptor subunit alpha; IL-3R subunit alpha; IL-3R-alpha; IL-3RA
UniProt Entry Name	IL3RA_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/mouse-human-antibody/cd123/72280>