

Mouse anti-Human CD3 Monoclonal Antibody | anti-CD3 antibody

Mouse anti Human CD3:RPE

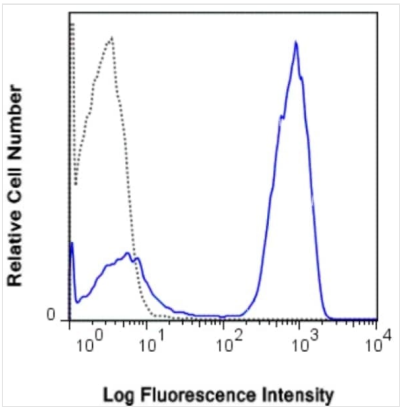
CATALOG # AAA50422	HOST Mouse	REACTIVITY Human	APPLICATIONS ELISA
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PRODUCT SYNONYMS

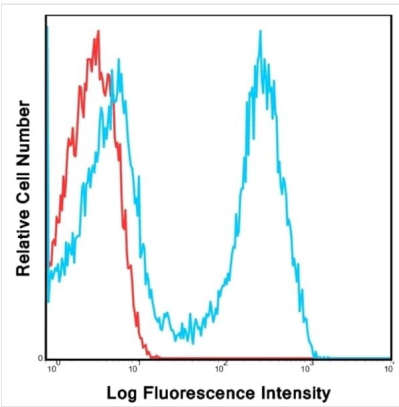
CD3; Monoclonal Antibody; Mouse anti Human CD3:RPE; CD3 antibody | OKT3; anti-CD3 antibody

PRODUCT SPECIFICATIONS

Host	Mouse
Reactivity	Human
Clonality	Monoclonal
Isotype	IgG2a
Clone Number	OKT3
Purity/Purification	Purified IgG prepared by affinity chromatography on Protein G from tissue culture supernatant >90 % by SDS PAGE
Form/Format	Phosphate buffered saline 0.09% Sodium Azide (NaN ₃) Purified IgG conjugated to R. Phycoerythrin (RPE) - liquid
Concentration	IgG concentration 0.1mg/ml (varies by lot)
Applicable Applications for anti-CD3 antibody	ELISA
Immunogen	Human peripheral blood lymphocytes
Conjugation	RPE
Preparation and Storage	Store at +4 degree C. DO NOT FREEZE. This product should be stored undiluted. This product is photosensitive and should be protected from light. Should this product contain a precipitate we recommend microcentrifugation before use.



Application Data
Surface staining of human peripheral blood lymphocytes with Mouse anti Human CD3:RPE (AAA50422) (Blue) with a relevant isotype control (Grey)



Application Data
Surface staining of human peripheral blood lymphocytes with Mouse anti Human CD3:FITC (Blue) with a relevant isotype control (Red)

ADDITIONAL INFORMATION

Related Product Information for anti-CD3 antibody	Mouse anti Human CD3 antibody, clone OKT3, recognizes T-cell surface glycoprotein CD3 epsilon chain (CD3epsilon), also known as T-cell surface antigen T3/Leu-4 epsilon. CD3epsilon is a subunit within the multiprotein cell surface receptor TCR-CD3 complex, which is expressed on the surface of mature T cells, NKT cells and thymocytes (Mariuzza et al. 2020). The CD3 complex is required for intracellular signaling and for TCR surface expression. Recruitment of the TCR/CD3 complex initiates early events leading to proliferation and differentiation of mature T cells into an effector cell (Guy & Vignali 2009).
	Mice that lack the CD3epsilon gene exhibit early arrest in T cell development and mutation of the gene in humans has been seen to result in severe combined immunodeficiency (SCID) (DeJarnette et al. 1998, de Saint Basile et al. 2004).
	Mouse anti Human CD3, clone OKT3 is commonly used in flow cytometry in the phenotyping human T cells. Characterization of the OKT3 clone has shown that it is able to compete and block the binding of the CD3 clones SK7 and UCHT1 to human T cells (Li et al. 2005). The OKT3 clone has also been found to have immunosuppressive properties in vivo. As result of this, the clone was humanized to be used as a therapeutic drug called Muromonomab (Orthoclone). Muromonomab was used as an immunosuppressive including for after solid organ transplants, to prevent the activation of CD4- and CD8- T cells (Wilde & Goa 1996). However, the drug has since been discontinued due to the development of other treatments with similar efficacy and fewer side effects (Reichert 2012).

NCBI AND UNIPROT INFORMATION

NCBI GI #	1345708
NCBI GeneID	916
UniProt Accession #	P07766; A8K997
Molecular Weight	207
NCBI Official Full Name	T-cell surface glycoprotein CD3 epsilon chain
NCBI Official Synonym Full Names	CD3e molecule, epsilon (CD3-TCR complex)
NCBI Official Symbol	CD3E
NCBI Official Synonym Symbols	T3E; TCRE; IMD18
NCBI Protein Information	T-cell surface glycoprotein CD3 epsilon chain; CD3-epsilon; T-cell surface antigen T3/Leu-4 epsilon chain; CD3e antigen, epsilon polypeptide (TIT3 complex); T-cell antigen receptor complex, epsilon subunit of T3
UniProt Protein Name	T-cell surface glycoprotein CD3 epsilon chain

UniProt Gene Name	CD3E
UniProt Synonym Gene Names	T3E
UniProt Entry Name	CD3E_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://www.aaabiotech.com/monoclonal/cd3-antibody-clone-okt3-elisa/50422>