

CD3 Monoclonal Antibody (S4.1), Qdot™ 655

Catalog Number Q10484

Product data sheet

Details		Species Reactivity	
Size	25 µL	Species reactivity	Human
Host/Isotope	Mouse / IgG2a	Published species	Mouse, Human, Not Applicable
Class	Monoclonal	Tested Applications	
Type	Antibody	Flow Cytometry (Flow)	Dilution *
Clone	S4.1	Assay-dependent	
Immunogen	Human CD3.	Published Applications	
Conjugate	Qdot™ 655	Flow Cytometry (Flow)	See 6 publications below
Form	Liquid	Miscellaneous PubMed (Misc)	See 4 publications below
Purification	purified	* Suggested working dilutions are given as a guide only. It is recommended that the user titrate the product for use in their own experiment using appropriate negative and positive controls.	
Storage buffer	0.05M borate, pH 8.3, with 1M betaine		
Contains	0.05% sodium azide		
Storage Conditions	4° C		

Background/Target Information

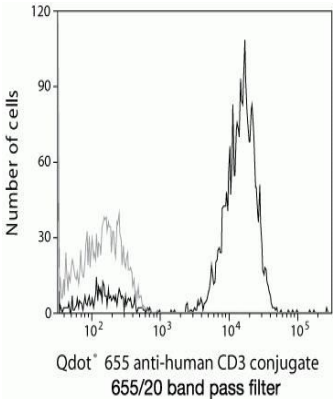
The CD3 subunit complex which is crucial in transducing antigen-recognition signals into the cytoplasm of T cells and in regulating the cell surface expression of the TCR complex. T cell activation through the antigen receptor (TCR) involves the cytoplasmic tails of the CD3 subunits CD3 gamma, CD3 delta, CD3 epsilon and CD3 zeta. These CD3 subunits are structurally related members of the immunoglobulins super family encoded by closely linked genes on human chromosome 11. The CD3 components have long cytoplasmic tails that associate with cytoplasmic signal transduction molecules and this association is mediated at least in part by a double tyrosine-based motif present in a single copy in the CD3 subunits. CD3 may play a role in TCR-induced growth arrest, cell survival and proliferation. The CD3 antigen is present on 68-82% of normal peripheral blood lymphocytes, 65-85% of thymocytes and Purkinje cells in the cerebellum. It is never expressed on B or NK cells. Decreased percentages of T lymphocytes may be observed in some autoimmune diseases. The genes encoding the CD3 epsilon, gamma and delta polypeptides are located on chromosome 11. Defects in the CD3 gene are associated with CD3 immunodeficiency.

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CD3 Antibody (Q10484) in Flow
Qdot® 655 anti-human CD3 conjugate 655/20 band pass filter

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PubMed References For CD3 Monoclonal Antibody (S4.1), Qdot™ 655

6 Flow Cytometry References

Species / Dilution	Summary
Mouse / 1:200	<p>Q10484 was used in Flow cytometry/Cell sorting to provide evidence of an antigen-specific CD8 T cell response in ALS4, which could be used to unravel disease mechanisms and as a potential biomarker of disease state.</p> <p>Nature (2022; 606: 945) "Clonally expanded CD8 T cells characterize amyotrophic lateral sclerosis-4." Author(s):Campisi L,Chizari S,Ho JSY,Gromova A,Arnold FJ,Mosca L,Mei X,Fstkchyan Y,Torre D,Beharry C,Garcia-Forn M,Jiménez-Alcázar M,Korobeynikov VA,Prazich J,Fayad ZA,Seldin MM,De Rubeis S,Bennett CL,Ostrow LW,Lunetta C,Squatrito M,Byun M,Shneider NA,Jiang N,La Spada AR,Marazzi I PubMed Article URL:http://dx.doi.org/10.1038/s41586-022-04844-5</p>
Not Applicable / Not Cited	<p>Q10484 was used in flow cytometry to study facilitation of HIV-1 transmission to cervico-vaginal tissue ex vivo by interleukin-7</p> <p>PLoS pathogens (2013; 9:) "Interleukin-7 facilitates HIV-1 transmission to cervico-vaginal tissue ex vivo." Author(s):Introini A, Vanpouille C,Lisco A,Grivel JC,Margolis L PubMed Article URL:http://dx.doi.org/10.1371/journal.ppat.1003148</p>
Human / Not Cited	<p>Q10484 was used in Flow cytometry/Cell sorting to reveal that robust reconstitution of immunoregulatory natural killer cells by day 14 after allogeneic stem cell transplantation is an important determinant of the clinical outcome.</p> <p>European journal of immunology (2018; 48: 316) "NK cells produce high levels of IL-10 early after allogeneic stem cell transplantation and suppress development of acute GVHD." Author(s):Chan YLT,Zuo J,Inman C,Croft W,Begum J,Croudace J,Kinsella F,Maggs L,Nagra S,Nunnick J,Abbotts B,Craddock C,Malladi R,Moss P PubMed Article URL:http://dx.doi.org/10.1002/eji.201747134</p>
Human / Not Cited	<p>Q10484 was used in Flow cytometry/Cell sorting to report on the gastrointestinal mucosa site during HIV infection and suggest that rectal CD8+ T-cells are primarily non-cytotoxic, and phenotypically shaped by the tissue microenvironment.</p> <p>Mucosal immunology (2017; 10: 1008) "Predominance of weakly cytotoxic, T-bet<sup>Low</sup>Eomes<sup>Neg</sup> CD8<sup>+</sup> T-cells in human gastrointestinal mucosa: implications for HIV infection." Author(s):Kiniy BE,Ganesh A,Critchfield JW,Hunt PW,Hecht FM,Somsouk M,Deeks SG,Shacklett BL PubMed Article URL:http://dx.doi.org/10.1038/mi.2016.100</p>
Human / Not Cited	<p>Q10012 was used in flow cytometry to examine the early impact of viral replicative capacity on HIV-1 immunopathogenesis</p> <p>Proceedings of the National Academy of Sciences of the United States of America (2015; 112: E1480) "Replicative fitness of transmitted HIV-1 drives acute immune activation, proviral load in memory CD4+ T cells, and disease progression." Author(s):Claiborne DT,Prince JL,Scully E,Macharia G,Micci L,Lawson B,Kopczynski J,Deymier MJ,Vanderford TH,Nganou-Makamdop K,Ende Z,Brooks K,Tang J,Yu T,Lakhi S,Kilembe W,Silvestri G,Douek D,Goepfert PA,Price MA,Allen SA,Paiardini M,Altfeld M,Gilmour J,Hunter E PubMed Article URL:http://dx.doi.org/10.1073/pnas.1421607112</p>
Not Applicable / Not Cited	<p>Q10012 was used in flow cytometry to study the improvement of simultaneous phenotype-specific telomere length measurement by FISH-flow cytometry by quantum dots thermal stability</p> <p>Journal of immunological methods (2009; 344: 6) "Quantum dots thermal stability improves simultaneous phenotype-specific telomere length measurement by FISH-flow cytometry." Author(s):Kapoor V,Hakim FT,Rehman N,Gress RE,Telford WG PubMed Article URL:http://dx.doi.org/10.1016/j.jim.2009.02.004</p>

4 Miscellaneous PubMed References

Species / Dilution	Summary
Human / Not Cited	<p>Q10012 was used in flow cytometry to analyze the proliferation and functional profile of circulating double positive T cells from acutely HIV-infected individuals and chronically HIV-infected viral controllers.</p> <p>Journal of immunology (Baltimore, Md. : 1950) (2012; 188: 4289) "CD4+CD8+ T cells represent a significant portion of the anti-HIV T cell response to acute HIV infection." Author(s):Frahm MA,Picking RA,Kuruc JD,McGee KS,Gay CL,Eron JJ,Hicks CB,Tomaras GD,Ferrari G PubMed Article URL:http://dx.doi.org/10.4049/jimmunol.1103701</p>

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Q10012 was used in flow cytometry to report the phase I trial results of CDX-301

Bone marrow transplantation (2015; 50: 924)

"Efficacy and safety of CDX-301, recombinant human Flt3L, at expanding dendritic cells and hematopoietic stem cells in healthy human volunteers."

Author(s):Anandasabapathy N,Breton G,Hurley A,Caskey M,Trumpfheller C,Sarma P,Pring J,Pack M,Buckley N,Matei I, Lyden D,Green J,Hawthorne T,Marsh HC,Yellin M,Davis T,Keler T,Schlesinger SJ

PubMed Article URL:<http://dx.doi.org/10.1038/bmt.2015.74>

Q10012 was used in flow cytometry to use zinc-finger nucleases to simultaneous modify ccr5 and cxcr4 in primary human CD4(+) T cells and introduce these cells into a humanized mouse model of HIV-1 infection.

Blood (2014; 123: 61)

"Simultaneous zinc-finger nuclease editing of the HIV coreceptors ccr5 and cxcr4 protects CD4+ T cells from HIV-1 infection."

Author(s):Didigu CA,Wilen CB,Wang J,Duong J,Secreti AJ,Danet-Desnoyers GA,Riley JL,Gregory PD,June CH,Holmes MC,Doms RW

PubMed Article URL:<http://dx.doi.org/10.1182/blood-2013-08-521229>

Q10012 was used in flow cytometry to compare the therapeutic efficacy of CD19-specific human primary T cells that constitutively express gamma(c)-cytokines

Blood (2010; 115: 3508)

"IL-7 and IL-21 are superior to IL-2 and IL-15 in promoting human T cell-mediated rejection of systemic lymphoma in immunodeficient mice."

Author(s):Markley JC,Sadelain M

PubMed Article URL:<http://dx.doi.org/10.1182/blood-2009-09-241398>

Human / Not Cited

Human / Not Cited

Mouse / Not Cited

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