PE/Cyanine7 anti-human CD3 Antibody

Catalog# / Size	317333 / 25 tests 317334 / 100 tests
Clone	OKT3
Regulatory Status	RUO
Workshop	HCDM listed
Other Names	T3, CD3ε
Isotype	Mouse IgG2a, κ
Description	CD3ε is a 20 kD chain of the CD3/T cell receptor (TCR) complex, which is composed of two CD3ε, one CD3γ, one CD3δ, one CD3ζ (CD247), and a T cell receptor (α/β or γ/δ) heterodimer. It is found on all mature T lymphocytes, NK T cells, and some thymocytes. CD3, also known as T3, is a member of the immunoglobulin superfamily that plays a role in antigen recognition, signal transduction, and T cell activation.

Product Details

Verified Reactivity	Human
Antibody Type	Monoclonal
Host Species	Mouse
Formulation	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and BSA (origin USA)
Preparation	The antibody was purified by affinity chromatography and conjugated with PE/Cyanine7 under optimal conditions.
Concentration	Lot-specific (to obtain lot-specific concentration, please enter the lot number in our Concentration and Expiration Lookup or Certificate of Analysis online tools.)
Storage & Handling	The antibody solution should be stored undiluted between 2°C and 8°C, and protected from prolonged exposure to light. **Do not freeze.**
Application	FC - Quality tested
Recommended Usage	Each lot of this antibody is quality control tested by immunofluorescent staining with flow cytometric analysis. For flow cytometric staining, the suggested use of this reagent is 5 µl per million cells in 100 µl staining volume or 5 µl per 100 µl of whole blood.
Excitation Laser	Blue Laser (488 nm) Green Laser (532 nm)/Yellow-Green Laser (561 nm)
Application Notes	The OKT3 monoclonal antibody reacts with an epitope on the epsilon-subunit within the human CD3 complex. Clone OKT3 can block the binding of clones SK7 and UCHT1.[4] The OKT3 antibody is able to induce T cell activation. Additional reported applications (for the relevant formats) include: immunohistochemical staining of acetone-fixed frozen sections and activation of T cells. The LEAF™ purified antibody (Endotoxin <0.1 EU/µg, Azide-Free, 0.2 µm filtered) is recommended for functional assays (Cat. No. 317304). For highly sensitive assays, we recommend Ultra-LEAF™ purified antibody (Cat. No. 317326) with a lower endotoxin limit than standard LEAF™ purified antibodies (Endotoxin <0.01 EU/µg).
Additional Product Notes	BioLegend is in the process of converting the name PE/Cy7 to PE/Cyanine7. The dye molecule remains the same, so you should expect the same quality and performance from our PE/Cyanine7 products. Please contact Technical Service if you have any questions.

Application References

(PubMed link indicates BioLegend citation)

1. Schlossman S, *et al.* Eds. 1995. Leucocyte Typing V. Oxford University Press. New York.
2. Knapp W. 1989. Leucocyte Typing IV. Oxford University Press New York.
3. Barclay N, *et al.* 1997. The Leucocyte Antigen Facts Book. Academic Press Inc. San Diego.

4. Li B, *et al.* 2005. *Immunology* 116:487.
5. Jeong HY, *et al.* 2008. *J. Leuckocyte Biol.* 83:755. PubMed
6. Alter G, *et al.* 2008. *J. Virol.* 82:9668. PubMed
7. Manevich-Mendelson E, *et al.* 2009. *Blood* 114:2344. PubMed
8. Pinto JP, *et al.* 2010. *Immunology.* 130:217. PubMed
9. Biggs MJ, *et al.* 2011. *J. R. Soc. Interface.* 8:1462. PubMed

Product Citations

1. Carre C, *et al.* 2021. iScience. 24:102970. PubMed
2. Beatson RE, *et al.* 2021. Cell Rep Med. 2:100473. PubMed
3. Ye C, *et al.* 2017. J Virol. 91:e01389-23. PubMed
4. Witkowski MT, *et al.* 2020. Cancer Cell. 37:867. PubMed
5. Raj D, *et al.* 2019. Gut. 68:1052. PubMed
6. Lee HJ, *et al.* 2017. Oncotarget. 8:113345. PubMed
7. Zhang Q, *et al.* 2021. Sci Transl Med. 13:eabg6986. PubMed
8. Calzoni E, *et al.* 2019. J Allergy Clin Immunol. 143:2317. PubMed
9. Theurich S *et al.* 2017. Cell metabolism. 26(1):171-184 . PubMed
10. Eckert EC, *et al.* 2020. Mol Ther Oncolytics. 0.710416667. PubMed

RRID

AB_2561451 (BioLegend Cat. No. 317333)
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Antigen Details

Structure Ig superfamily, the subunits CD3γ, CD3δ, CD3ζ (CD247) and TCR (α/β or γ/δ) form the CD3/TCR complex, 20 kD

Distribution Mature T and NK T cells, thymocyte differentiation

Function Antigen recognition, signal transduction, T cell activation

Ligand/Receptor Peptide antigen bound to MHC

Cell Type NKT cells, T cells, Thymocytes, Tregs

Biology Area Immunology

Molecular Family CD Molecules

Antigen References

1. Barclay N, *et al.* 1993. The Leucocyte FactsBook. Academic Press. San Diego.
2. Beverly P, *et al.* 1981. *Eur. J. Immunol.* 11:329.
3. Lanier L, *et al.* 1986. *J. Immunol.* 137:2501.

Gene ID 916

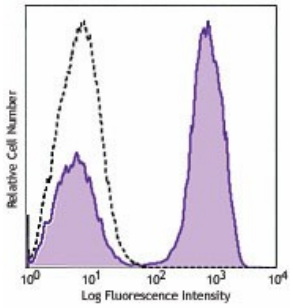
Related Protocols

Cell Surface Flow Cytometry Staining Protocol

Other Formats

Purified anti-human CD3, FITC anti-human CD3, PE anti-human CD3, Alexa Fluor® 488 anti-human CD3, Alexa Fluor® 647 anti-human CD3, Pacific Blue™ anti-human CD3, APC anti-human CD3, Biotin anti-human CD3, Brilliant Violet 605™ anti-human CD3, Brilliant Violet 650™ anti-human CD3, Ultra-LEAF™ Purified anti-human CD3, Brilliant Violet 711™ anti-human CD3, Brilliant Violet 785™ anti-human CD3, Brilliant Violet 510™ anti-human CD3, PE/Cyanine7 anti-human CD3, PerCP/Cyanine5.5 anti-human CD3, PerCP anti-human CD3, Alexa Fluor® 700 anti-human CD3, APC/Cyanine7 anti-human CD3, Brilliant Violet 421™ anti-human CD3, PE/Dazzle™ 594 anti-human CD3, APC/Fire™ 750 anti-human CD3, GMP Ultra-LEAF™ Purified anti-human CD3 SF, PE/Cyanine5 anti-human CD3 Antibody

Product Data



Human peripheral blood lymphocytes were stained with CD3 (clone OKT3) PE/Cyanine7 (filled histogram) or mouse IgG2a, κ PE/Cyanine7 isotype control (open histogram).

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