PE anti-human CD3 Antibody

Catalog# / Size	300407 / 25 tests 300456 / 100 µg 300408 / 100 tests 300441 / 500 tests
Clone	UCHT1
Workshop	III 471
Other Names	T3, CD3ε
Isotype	Mouse IgG1, 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 cells, NKT 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

Reactivity	Human, **Cross-Reactivity:** Chimpanzee
Antibody Type	Monoclonal
Host Species	Mouse
Formulation	µg size: Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide. test sizes: Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and 0.2% (w/v) BSA (origin USA).
Preparation	The antibody was purified by affinity chromatography, and conjugated with PE under optimal conditions.
Concentration	µg sizes: 0.2 mg/ml test sizes: lot-specific (please contact technical support for concentration and total µg amount)
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 using the µg size, the suggested use of this reagent is ≤0.5 µg per million cells in 100 µl volume. It is recommended that the reagent be titrated for optimal performance for each application. For flow cytometric staining using the test sizes, 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	Additional reported applications (for the relevant formats) include: immunohistochemical staining of acetone-fixed frozen sections[4,6,7] and formalin-fixed paraffin-embedded sections[11], immunoprecipitation[1], activation of T cells[2,3,5], and Western blotting[9]. The LEAF™ purified antibody (Endotoxin <0.1 EU/µg, Azide-Free, 0.2 µm filtered) is recommended for functional assays. For highly sensitive assays, we recommend Ultra-LEAF™ purified antibody (Cat. No. 300438) with a lower endotoxin limit than standard LEAF™ purified antibodies (Endotoxin <0.01 EU/µg).

Application References

(PubMed link indicates BioLegend citation)

1. Salmeron A, et al. 1991. J. Immunol. 147:3047. (IP)
2. Graves J, et al. 1991. J. Immunol. 146:2102. (Activ)
3. Lafont V, et al. 2000. J. Biol. Chem. 275:19282. (Activ)
4. Ryschich E, et al. 2003. Tissue Antigens 62:48. (IHC)
5. Thompson AG, et al. 2004. J. Immunol. 173:1671. (Activ)
6. Sakkas LI, et al. 1998. Clin. Diagn. Lab. Immun. 5:430. (IHC)
7. Mack CL, et al. 2004. Pediatr. Res. 56:79. (IHC)
8. Thakral D, et al. 2008. J. Immunol. 180:7431. (FC) PubMed
9. Van Dongen JJM, et al. 1988. Blood 71:603. (WB)
10. Yoshino N, et al. 2000. Exp. Anim. (Tokyo) 49:97. (FC)
11. Pollard, K. et al. 1987. J. Histochem. Cytochem. 35:1329. (IHC)
12. Luckashenak N, et al. 2013. J. Immunol. 190:27. PubMed

Product Citations

1. Thakral D, et al. 2008. J Immunol. 180:7431. PubMed
2. Tomita K, et al. 2013. Neuroscience. 236:55. PubMed
3. Wang L, et al. 2014. Proc Natl Acad Sci U S A. 111:3146. PubMed
4. Groen R, et al. 2015. J Leukoc Biol. 98: 623 - 630. PubMed
5. O'Connor K, et al. 2016. Genes Immun. 10.1038/gene.2016.27. PubMed
6. Yuan Z, et al. 2016. J Virol. 90: 7728 - 7739. PubMed
7. Shoda H, et al. 2017. Arthritis Research & Therapy . 10.1186/s13075-017-1308-y. PubMed
8. Yuan Z, et al. 2018. Emerg Microbes Infect. 7:59. PubMed
9. Tiwarekar V, et al. 2018. J Virol. 92:17. PubMed
10. Miggitsch C, et al. 2019. EBioMedicine. 46:387. PubMed

RRID

AB_314061 (BioLegend Cat. No. 300407)
AB_2564150 (BioLegend Cat. No. 300456)
AB_314062 (BioLegend Cat. No. 300408)
AB_2562047 (BioLegend Cat. No. 300441)

Antigen Details

Structure

Ig superfamily, with the subunits of CD3γ, CD3δ, CD3ζ (CD247) and TCR (α/β or γ/δ) forms 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, Innate Immunity

Molecular Family

CD Molecules, TCRs

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. 137:2501-2507.

Gene ID

916

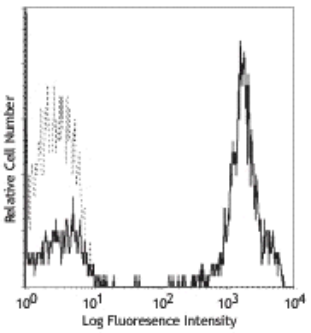
Related Protocols

Cell Surface Flow Cytometry Staining Protocol

Other Formats

APC anti-human CD3, Biotin anti-human CD3, FITC anti-human CD3, PE/Cyanine5 anti-human CD3, Purified anti-human CD3, Alexa Fluor® 647 anti-human CD3, Alexa Fluor® 488 anti-human CD3, Pacific Blue™ anti-human CD3, PE/Cyanine7 anti-human CD3, Alexa Fluor® 700 anti-human CD3, APC/Cyanine7 anti-human CD3, PerCP anti-human CD3, PerCP/Cyanine5.5 anti-human CD3, Brilliant Violet 421™ anti-human CD3, Brilliant Violet 570™ anti-human CD3, Ultra-LEAF™ Purified anti-human CD3, Purified anti-human CD3 (Maxpar® Ready), Alexa Fluor® 594 anti-human CD3, PE/Dazzle™ 594 anti-human CD3, Brilliant Violet 510™ anti-human CD3, Brilliant Violet 605™ anti-human CD3, Brilliant Violet 711™ anti-human CD3, Brilliant Violet 650™ anti-human CD3, APC/Fire™ 750 anti-human CD3, Brilliant Violet 785™ anti-human CD3, TotalSeq™-A0034 anti-human CD3, TotalSeq™-B0034 anti-human CD3, TotalSeq™-C0034 anti-human CD3, PE anti-human CD3, KIRAVIA Blue 520™ anti-human CD3

Product Data



Human peripheral blood lymphocytes stained with UCHT1 PE

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