SONY

# Product Data Sheet

## Pacific Blue™ anti-human CD3

**Catalog # / Size:** 2102085 / 100 µg
2102090 / 25 µg
2102155 / 100 tests
2102210 / 500 tests

**Clone:** UCHT1

**Isotype:** Mouse IgG1, κ

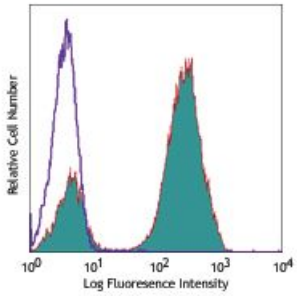
**Reactivity:** Human

**Preparation:** The antibody was purified by affinity chromatography, and conjugated with Pacific Blue™ under optimal conditions.

**Formulation:** test size: Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and BSA (origin USA).
µg sizes: Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.

**Workshop Number:** III 471

**Concentration:** Lot-specific



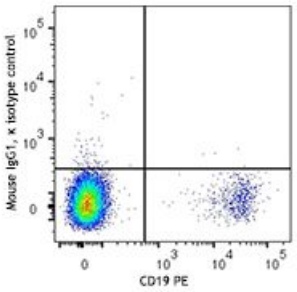

Human peripheral blood lymphocytes stained with UCHT1 Pacific Blue™

## Applications:

**Applications:** Flow Cytometry

**Recommended Usage:** Each lot of this antibody is quality control tested by immunofluorescent staining with flow cytometric analysis.
**For test size**, the suggested use of this reagent for immunofluorescent staining is 5 µl per million cells or 5 µl per 100 µl of whole blood.
**For µg sizes**, the suggested use of this reagent for immunofluorescent staining is ≤2.0 µg per $10^6$ cells in 100 µl volume or 100 µl of whole blood.
It is recommended that the reagent be titrated for optimal performance for each application.

* Pacific Blue™ has a maximum emission of 455 nm when it is excited at 405 nm. Prior to using Pacific Blue™ conjugate for flow cytometric analysis, please verify your flow cytometer's capability of exciting and detecting the fluorochrome.




Human peripheral blood lymphocytes were stained with anti-human CD4 FITC and anti-human CD25 (clone M-A251) Spark YG™ 581 (left) or anti-human CD4 FITC only (right).

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**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], immunoprecipitation1, 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 (Cat. No. 300414). 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/microg).

**Application References:**


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
13. Laurent AJ, *et al.* 2014. *PLoS One.* 9:103683. PubMed
14. Li J, *et al.* 2015. *Cancer Res.* 75:508. PubMed
15. Stoeckius M, *et al.* 2017. *Nat. Methods.* 14:865-868. (PG)


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**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.

**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.



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