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# Product Data Sheet

# Biotin anti-human CD3

**Catalog # / Size:** 300403 / 25 µg
300404 / 100 µg

**Clone:** UCHT1

**Isotype:** Mouse IgG1, κ

**Workshop Number:** III 471

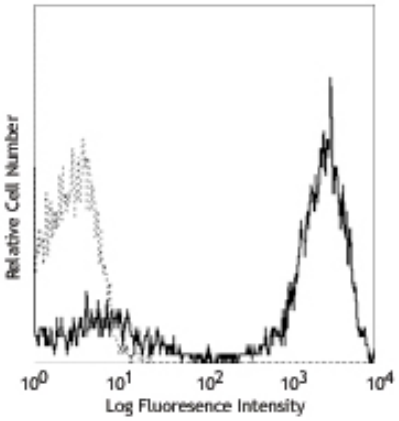
**Reactivity:** Human, **Cross-Reactivity:** Chimpanzee

**Preparation:** The antibody was purified by affinity chromatography, and conjugated with biotin under optimal conditions. The solution is free of unconjugated biotin.

**Formulation:** Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.

**Concentration:** 0.5 mg/ml

**Storage:** The antibody solution should be stored undiluted at 4°C. **Do not freeze.**




*Human peripheral blood lymphocytes stained with biotinylated UCHT1 and then detected with Sav-PE*

# Applications:

**Applications:** FC - *Quality tested*

**Recommended Usage:** Each lot of this antibody is quality control tested by immunofluorescent staining with flow cytometric analysis. For immunofluorescent staining, 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.

**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 (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/µg).

**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)

**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.

**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.

**Related Products:**

| Product | Clone | Application |
|---|---|---|
| Biotin anti-human CD19 | HIB19 | FC |
| Biotin anti-human CD3 | HIT3a | FC |
| Biotin anti-human CD8a | HIT8a | FC |
| Biotin anti-human CD4 | RPA-T4 | FC |
| Biotin anti-human CD8a | RPA-T8 | FC |
| Biotin Mouse IgG1, κ Isotype Ctrl | MOPC-21 | FC, ICFC |
| APC Streptavidin | | FC, ICFC |
| APC/Cy7 Streptavidin | | FC, ICFC |
| HRP Streptavidin | | ELISA, ELISPOT, IHC, WB |
| PE Streptavidin | | FC, ICFC |
| PE/Cy5 Streptavidin | | FC, ICFC |
| PE/Cy7 Streptavidin | | FC, ICFC |



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| Cell Staining Buffer | FC, ICC, ICFC |
| RBC Lysis Buffer (10X) | FC, ICFC |
| Human TruStain FcX™ (Fc Receptor Blocking Solution) | FC, ICC, ICFC |



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