

TECHNICAL DATA SHEET

# APC Anti-Human CD3 (Hit3a)

Catalog Number: 20-0039

## PRODUCT INFORMATION

**Contents:** APC Anti-Human CD3 (Hit3a)

**Isotype:** Mouse IgG2a, kappa

**Concentration:** 5 µL (0.25 µg)/test

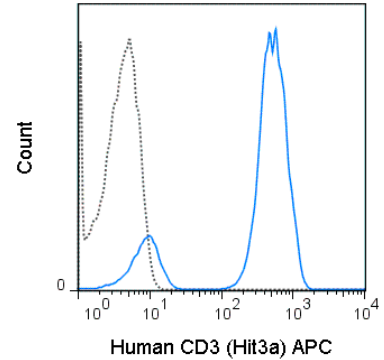
**Clone:** Hit3a

**Reactivity:** Human

**Use By:** 12 months from date of receipt

**Storage Conditions:** 2-8°C protected from light

**Formulation:** 10 mM NaH<sub>2</sub>PO<sub>4</sub>, 150 mM NaCl, 0.09% Na<sub>3</sub>N, 0.1% gelatin, pH7.2



Human peripheral blood lymphocytes were stained with 5 µL (0.25 µg) APC Anti-Human CD3 (20-0039) (solid line) or 0.25 µg APC Mouse IgG2a isotype control (dashed line).

## DESCRIPTION

The Hit3a antibody is specific for human CD3ε, also known as CD3 epsilon, a 20 kDa subunit of the T cell receptor complex, along with CD3 gamma and CD3 delta. These integral membrane protein chains assemble with additional chains of the T cell receptor (TCR), as well as CD3 zeta chain, to form the T cell receptor – CD3 complex. Together with co-receptors CD4 or CD8, the complex serves to recognize antigens bound to MHC molecules on antigen-presenting cells. These interactions promote T cell receptor signaling (T cell activation), inducing cell proliferation, differentiation, production of cytokines or activation-induced cell death. CD3 is differentially expressed during thymocyte-to-T cell development and on all mature T cells. The Hit3a antibody is a widely used phenotypic marker for human T cells. In addition, binding/cross-linking of Hit3a antibody to CD3ε can induce cell activation. The antibody has also been demonstrated to be cross-reactive with Chimpanzee CD3. Please choose the appropriate format for each application.

## PREPARATION & STORAGE

This monoclonal antibody was purified from tissue culture supernatant via affinity chromatography. The purified antibody was conjugated under optimal conditions, with unreacted dye removed from the preparation. It is recommended to store the product undiluted at 4°C, and protected from prolonged exposure to light. Do not freeze.

## APPLICATION NOTES

This antibody preparation has been pre-titrated and quality-tested for flow cytometry using an appropriate cell type. The antibody has been diluted for use at 5 µL per test, defined as the amount of antibody that will stain a cell sample in a final volume of approximately 100 µL. The number of cells within a sample should be determined empirically, but typically ranges between 1x10<sup>5</sup> to 1x10<sup>8</sup> cells.

## REFERENCES

- Lesourne R, Zvezdova E, Song K-D, El-Khoury D, Uehara S, Barr VA, Samelson LE and Love PE. 2012. J. Immunol. 189: 1154-1161. (in vitro activation)
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- Ge Shuwang, Hertel B, Emden SH, Beneke J, Menne J, Haller H, and von Vietinghoff S. 2012. Nephrol. Dial. Transplant. 27: 2768-2772. (Immunofluorescence microscopy)
- Soto PC, Stein LL, Hurtado-Ziola N, Hedrick SM, and Varki A. 2010. J. Immunol. 184: 4185-4195. (Flow cytometry – Chimpanzee)
- Westermann J, Bode U, Sahle A, Speck U, Karin N, Bell EB, Kalies K, and Gebert A. 2005. J. Immunol. 174: 2517-2524. (Immunohistochemistry – frozen tissue)
- Mukouyama H, Janzen NK, Hernandez JM, Lam JS, Caliliw R, Wang AY, Figlin RA, Beldegrun AS, and Zeng G. 2004. Clin. Cancer Res. 10: 1421-1429. (in vitro blocking)

Tonbo Biosciences tests all antibodies by flow cytometry. Citations are provided as a resource for additional applications that have not been validated by Tonbo Biosciences. Please choose the appropriate format for each application and consult Materials and Methods sections for additional details about the use of any product in these publications.

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