Biotin anti-human CD3 Antibody

Catalog# / Size	300303 / 25 µg 300304 / 100 µg
Clone	HIT3a
Regulatory Status	RUO
Workshop	V CD03.05
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.
Preparation	The antibody was purified by affinity chromatography, and conjugated with biotin under optimal conditions.
Concentration	0.5 mg/ml
Storage & Handling	The antibody solution should be stored undiluted between 2°C and 8°C. **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 ≤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 (for the relevant formats) applications include: immunohistochemical staining of acetone-fixed frozen sections, immunoprecipitation, and activation of T lymphocytes[4-7]. The HIT3a antibody is able to stimulate T cell activation. The LEAF™ purified antibody (Endotoxin <0.1 EU/µg, Azide-Free, 0.2 µm filtered) is recommended for functional assays (Cat. No. 300314). For highly sensitive assays, we recommend Ultra-LEAF™ purified antibody (Cat. No. 300332) with a lower endotoxin limit than standard LEAF™ purified antibodies (Endotoxin <0.01 EU/µg).

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. Sedelies KA, *et al.* 2004. *J. Biol. Chem.* 279:26581. (Activ)
5. Rivollier A, *et al.* 2004. *Blood* 104:4029. (Activ)
6. Scharschmidt E, *et al.* 2004. *Mol. Cell Biol.* 24:3860. (Activ)
7. Smeltz RB. 2007. *J. Immunol.* 178:4786. (Activ)

Product Citations

1. Rohde D, *et al.* 2022. Nat Cardiovasc Res. 1:28. PubMed
2. Agarwal S, *et al.* 2020. Cell Reports. 30(5):1292-1299.e3.. PubMed
3. Zebrowska A, *et al.* 2022. Cells. 11:. PubMed
4. Heyde A, *et al.* 2021. Cell. 184(5):1348-1361.e22. PubMed
5. Mondal SK, *et al.* 2021. Methods Mol Biol. 2265:305. PubMed

RRID	AB_314039 (BioLegend Cat. No. 300303) AB_314040 (BioLegend Cat. No. 300304)

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	T cells, NKT cells, Thymocytes, Tregs
Biology Area	Immunology
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

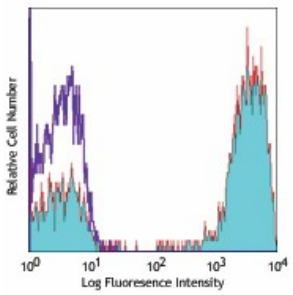
Related Protocols

Cell Surface Flow Cytometry Staining Protocol

Other Formats

APC anti-human CD3, Biotin anti-human CD3, FITC anti-human CD3, PE anti-human CD3, PE/Cyanine5 anti-human CD3, Purified anti-human CD3, APC/Cyanine7 anti-human CD3, PE/Cyanine7 anti-human CD3, Alexa Fluor® 488 anti-human CD3, Alexa Fluor® 647 anti-human CD3, Alexa Fluor® 700 anti-human CD3, PerCP anti-human CD3, PerCP/Cyanine5.5 anti-human CD3, Pacific Blue™ anti-human CD3, Ultra-LEAF™ Purified anti-human CD3, PE/Dazzle™ 594 anti-human CD3

Product Data



Human peripheral blood lymphocytes stained with biotinylated HIT3a, followed by Sav-PE

8999 BioLegend Way, San Diego, CA 92121 www.biolegend.com
Toll-Free Phone: 1-877-Bio-Legend (246-5343) Phone: (858) 768-5800 Fax: (877) 455-9587