

## Spark PLUS V475™ anti-human CD3 Antibody

<b>Catalog# / Size</b>	317373 / 25 tests
<b>Clone</b>	OKT3
<b>Regulatory Status</b>	RUO
<b>Workshop</b>	HCDM listed
<b>Other Names</b>	T3, CD3ε
<b>Isotype</b>	Mouse IgG2a, κ
<b>Description</b>	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

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<b>Verified Reactivity</b>	Human
<b>Antibody Type</b>	Monoclonal
<b>Host Species</b>	Mouse
<b>Formulation</b>	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and BSA (origin USA)
<b>Preparation</b>	The antibody was purified by affinity chromatography and conjugated with Spark PLUS V475™ under optimal conditions.
<b>Concentration</b>	Lot-specific (to obtain lot-specific concentration and expiration, please enter the lot number in our <a href="#">Certificate of Analysis</a> online tool.)
<b>Storage &amp; Handling</b>	The antibody solution should be stored undiluted between 2°C and 8°C, and protected from prolonged exposure to light. <b>Do not freeze.</b>
<b>Application</b>	<a href="#">FC - Quality tested</a>
<b>Recommended Usage</b>	Each lot of this antibody is quality control tested by <a href="#">immunofluorescent staining with flow cytometric analysis</a> . For flow cytometric staining, 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. It is recommended that the reagent be titrated for optimal performance for each application.  * Spark PLUS V475™ has a maximum excitation of 404 nm and a maximum emission of 475 nm.
<b>Excitation Laser</b>	Violet Laser (405 nm)
<b>Application Notes</b>	The OKT3 monoclonal antibody reacts with an epitope on the epsilon-subunit within the human CD3 complex.  Clone OKT3 can block the binding of clones SK7 and UCHT1. <sup>4</sup> The OKT3 antibody is able to induce T cell activation. Additional reported applications (for the relevant formats) include: immunohistochemical staining of acetone-fixed frozen sections and activation of T cells. The LEAF™ purified antibody (Endotoxin <0.1 EU/µg, Azide-Free, 0.2 µm filtered) is recommended for functional assays (Cat. No. 317304). For highly sensitive assays, we recommend Ultra-LEAF™ purified antibody (Cat. No. 317326) 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. Li B, *et al.* 2005. *Immunology* 116:487.
5. Jeong HY, *et al.* 2008. *J. Leukocyte Biol.* 83:755. [PubMed](#)
6. Alter G, *et al.* 2008. *J. Virol.* 82:9668. [PubMed](#)
7. Manevich-Mendelson E, *et al.* 2009. *Blood* 114:2344. [PubMed](#)
8. Pinto JP, *et al.* 2010. *Immunology.* 130:217. [PubMed](#)
9. Biggs MJ, *et al.* 2011. *J. R. Soc. Interface.* 8:1462. [PubMed](#)

## Antigen Details

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<b>Structure</b>	Ig superfamily, the subunits CD3 $\gamma$ , CD3 $\delta$ , CD3 $\zeta$ (CD247) and TCR ( $\alpha/\beta$ or $\gamma/\delta$ ) form the CD3/TCR complex, 20 kD
<b>Distribution</b>	Mature T and NK T cells, thymocyte differentiation
<b>Function</b>	Antigen recognition, signal transduction, T cell activation
<b>Ligand/Receptor</b>	Peptide antigen bound to MHC
<b>Cell Type</b>	NKT cells, T cells, Thymocytes, Tregs
<b>Biology Area</b>	Immunology
<b>Molecular Family</b>	CD Molecules

### 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.

### Gene ID

[916](#)

## Related Protocols

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- [Cell Surface Flow Cytometry Staining Protocol](#)

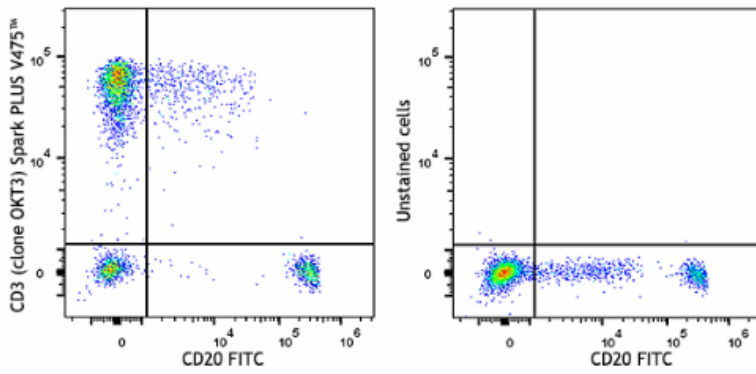
## Other Formats

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Purified anti-human CD3, FITC anti-human CD3, PE anti-human CD3, Alexa Fluor® 488 anti-human CD3, Alexa Fluor® 647 anti-human CD3, Pacific Blue™ anti-human CD3, APC anti-human CD3, Biotin anti-human CD3, Brilliant Violet 605™ anti-human CD3, Brilliant Violet 650™ anti-human CD3, Ultra-LEAF™ Purified anti-human CD3, Brilliant Violet 711™ anti-human CD3, Brilliant Violet 785™ anti-human CD3, Brilliant Violet 510™ anti-human CD3, PE/Cyanine7 anti-human CD3, PerCP/Cyanine5.5 anti-human CD3, PerCP anti-human CD3, Alexa Fluor® 700 anti-human CD3, APC/Cyanine7 anti-human CD3, Brilliant Violet 421™ anti-human CD3, PE/Dazzle™ 594 anti-human CD3, APC/Fire™ 750 anti-human CD3, Cell-Vive™ GMP Ultra-LEAF™ Purified anti-human CD3 SF, PE/Cyanine5 anti-human CD3 Antibody, Cell-Vive™ GMP Ultra-LEAF™ Biotin anti-human CD3 SF, Spark UV™ 387 anti-human CD3, Spark Red™ 718 anti-human CD3, TotalSeq™-A1289 anti-human CD3, TotalSeq™-B1289 anti-human CD3, TotalSeq™-C1289 anti-human CD3, Spark YG™ 581 anti-human CD3 (Flexi-Fluor™), Spark PLUS V475™ anti-human CD3 Antibody

## Product Data

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Human peripheral blood cells were stained with anti-human CD20 (clone 2H7) FITC and anti-human CD3 (clone OKT3) Spark PLUS V475™ (left) or stained with anti-human CD20 (clone 2H7) FITC only (right). Data shown are gated on the lymphocyte population.

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