

## Spark PLUS B550™ anti-human CD38 Antibody

<b>Catalog# / Size</b>	303563 / 25 tests 303564 / 100 tests
<b>Clone</b>	HIT2
<b>Regulatory Status</b>	RUO
<b>Workshop</b>	III 155
<b>Other Names</b>	T10, ADP-ribosyl cyclase
<b>Isotype</b>	Mouse IgG1, $\kappa$
<b>Description</b>	CD38 is a 45 kD type II transmembrane glycoprotein also known as T10. It is an ADP-ribosyl hydrolase expressed at variable levels on hematopoietic cells and in some non-hematopoietic tissues (such as brain, muscles, and kidney). In humans, it is expressed at high levels on plasma cells and activated T and B cells. By functioning as both a cyclase and a hydrolase, CD38 mediates lymphocyte activation, adhesion, and the metabolism of cADPR and NAADP. CD31 is the ligand of CD38.

### Product Details

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<b>Verified Reactivity</b>	Human
<b>Reported Reactivity</b>	Chimpanzee, Horse, Cow
<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 B550™ 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 $\mu$ L per million cells in 100 $\mu$ L staining volume or 5 $\mu$ L per 100 $\mu$ L of whole blood. It is recommended that the reagent be titrated for optimal performance for each application.  * Spark PLUS B550™ has a maximum excitation of 516 nm and a maximum emission of 540 nm.
<b>Excitation Laser</b>	Blue Laser (488 nm)
<b>Application Notes</b>	Additional reported applications (for the relevant formats) include: immunohistochemical staining of acetone-fixed frozen tissue sections <sup>6</sup> and spatial biology (IBEX) <sup>10,11</sup> .

## Application References

(PubMed link indicates  
BioLegend citation)

1. Kishimoto T, *et al.* Eds. 1997. Leucocyte Typing VI. Garland Publishing Inc. London.
2. Dieu M. 1998. *J. Exp. Med.* 188:373.
3. Esser M, *et al.* 2001. *J. Virol.* 75:6173.
4. Jeannin P, *et al.* 1999. *J. Immunol.* 162:2044.
5. Kapsogeorgou EK, *et al.* 2001. *J. Immunol.* 166:3107.
6. van der Voort R, *et al.* 1997. *J. Exp. Med.* 185:2121. (IHC)
7. Bende RJ, *et al.* 2003. *Am. J. Pathol.* 162:105.
8. Lehner M, *et al.* 2008. *J. Leukoc. Biol.* 83:883. [PubMed](#)
9. Yoshino N, *et al.* 2000. *Exp. Anim. (Tokyo)* 49:97. (FC)
10. Radtke AJ, *et al.* 2020. *Proc Natl Acad Sci USA.* 117:33455-33465. (SB) [PubMed](#)
11. Radtke AJ, *et al.* 2022. *Nat Protoc.* 17:378-401. (SB) [PubMed](#)

## RRID

AB\_3675027 (BioLegend Cat. No. 303563)  
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## Antigen Details

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<b>Structure</b>	ADP-ribosyl cyclase, ectoenzyme, type II glycoprotein, 45 kD
<b>Distribution</b>	T cells, B cells, NK, myeloid, plasma, and dendritic cells
<b>Function</b>	Ecto-ADP-ribosyl cyclase, calcium signaling, cell activation
<b>Ligand/Receptor</b>	CD31, hyaluronic acid
<b>Cell Type</b>	B cells, Dendritic cells, NK cells, Plasma cells, T cells
<b>Biology Area</b>	Immunology
<b>Molecular Family</b>	Adhesion Molecules, CD Molecules
<b>Antigen References</b>	1. Ferrero E, <i>et al.</i> 1999. <i>J. Leukoc. Biol.</i> 65:151. 2. Lund F, <i>et al.</i> 1995. <i>Immunol. Today</i> 16:469.
<b>Gene ID</b>	<a href="#">952</a>

## Related Protocols

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

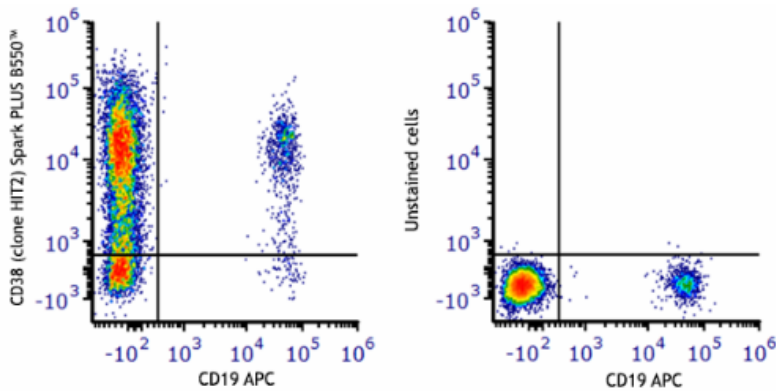
## Other Formats

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APC anti-human CD38, FITC anti-human CD38, PE anti-human CD38, PE/Cyanine5 anti-human CD38, Purified anti-human CD38, Alexa Fluor® 488 anti-human CD38, Alexa Fluor® 647 anti-human CD38, PE/Cyanine7 anti-human CD38, Biotin anti-human CD38, PerCP anti-human CD38, PerCP/Cyanine5.5 anti-human CD38, Alexa Fluor® 700 anti-human CD38, Brilliant Violet 421™ anti-human CD38, Brilliant Violet 711™ anti-human CD38, Brilliant Violet 785™ anti-human CD38, Brilliant Violet 605™ anti-human CD38, APC/Cyanine7 anti-human CD38, Purified anti-human CD38 (Maxpar® Ready), PE/Dazzle™ 594 anti-human CD38, Brilliant Violet 510™ anti-human CD38, TotalSeq™-A0389 anti-human CD38, TotalSeq™-C0389 anti-human CD38, APC/Fire™ 750 anti-human CD38, TotalSeq™-B0389 anti-human CD38, APC/Fire™ 810 anti-human CD38, Spark NIR™ 685 anti-human CD38 Antibody, TotalSeq™-D0389 anti-human CD38, GMP PE anti-human CD38, GMP FITC anti-human CD38, Pacific Blue™ anti-human CD38, GMP APC/Fire™ 750 anti-human CD38, GMP PE/Dazzle™ 594 anti-human CD38, GMP APC anti-human CD38, GMP PE/Cyanine7 anti-human CD38, Spark Blue™ 515 anti-human CD38, GMP Pacific Blue™ anti-human CD38, Spark Violet™ 423 anti-human CD38, Brilliant Violet 650™ anti-human CD38, Spark PLUS B550™ anti-human CD38, GMP PerCP/Cyanine5.5 anti-human CD38

## Product Data

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Human peripheral blood lymphocytes were stained with anti-human CD19 (clone HIB19) APC and anti-human CD38 (clone HIT2) Spark PLUS B550™ (left) or stained with anti-human CD19 (clone HIB19) APC only (right).

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