

## Brilliant Violet 421™ anti-human CD80 Antibody

<b>Catalog# / Size</b>	305221 / 25 tests 305222 / 100 tests
<b>Clone</b>	2D10
<b>Regulatory Status</b>	RUO
<b>Workshop</b>	VI CD80.1
<b>Other Names</b>	B7-1, B7, BB1
<b>Isotype</b>	Mouse IgG1, κ
<b>Description</b>	CD80, also known as B7-1, B7, and BB1, is a 60 kD single chain type I glycoprotein belonging to the immunoglobulin superfamily. CD80 is expressed on activated B and T cells, macrophages, and dendritic cells. CD80 binds to CD28 and CD152 (CTLA-4). Along with CD86, CD80 plays a critical role in regulation of T cell activation. The interaction of CD80 with CD28 provides a potent costimulatory signal for T cell activation through the CD3 complex, while its interaction with CTLA-4 provides an inhibitory signal for T cell activation.

### Product Details

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<b>Verified Reactivity</b>	Human
<b>Reported Reactivity</b>	Rhesus
<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 Brilliant Violet 421™ under optimal conditions.
<b>Concentration</b>	Lot-specific (to obtain lot-specific concentration, please enter the lot number in our <a href="#">Concentration and Expiration Lookup</a> or <a href="#">Certificate of Analysis</a> online tools.)
<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>	<p>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.</p> <p>Brilliant Violet 421™ excites at 405 nm and emits at 421 nm. The standard bandpass filter 450/50 nm is recommended for detection. Brilliant Violet 421™ is a trademark of Sirigen Group Ltd.</p> <p><a href="#">Learn more about Brilliant Violet™.</a></p> <p>This product is subject to proprietary rights of Sirigen Inc. and is made and sold under license from Sirigen Inc. The purchase of this product conveys to the buyer a non-transferable right to use the purchased product for research purposes only. This product may not be resold or incorporated in any manner into another product for resale. Any use for therapeutics or diagnostics is strictly prohibited. This product is covered by U.S. Patent(s), pending patent applications and foreign equivalents.</p>
<b>Excitation Laser</b>	Violet Laser (405 nm)
<b>Application Notes</b>	Additional reported applications (for the relevant formats) include: <i>in vitro</i> blocking of T cell activation, immunohistochemical staining of acetone-fixed frozen tissue sections <sup>2</sup> , immunoprecipitation, and Western blotting <sup>3</sup> . The Ultra-LEAF™ purified antibody (Endotoxin <0.1 EU/µg, Azide-Free, 0.2 µm filtered) is recommended for functional assays (Cat. Nos. 305245 & 305246).

## Application References

1. Kishimoto T, *et al.* Eds. 1997. Leucocyte Typing VI. Garland Publishing Inc. London.
2. Battifora M. 1998. *J. Clin. Endocr. Metab.* 83:4130. (IHC)
3. Van der Merwe PA, *et al.* 1997. *J. Exp. Med.* 185:3. (WB)
4. Jayakumar A, *et al.* 2008. *Infect. Immun.* 76:2138. [PubMed](#)
5. Schubert DA, *et al.* 2012. *J. Exp. Med.* 209:335. [PubMed](#)
6. Wen T, *et al.* 2014. *J. Immunol.* 192:5481. [PubMed](#)

## Product Citations

1. Leylek R, *et al.* 2019. *Cell Rep.* 29:3736. [PubMed](#)
2. Anderson AE, *et al.* 2022. *NPJ Regen Med.* 7:6. [PubMed](#)
3. Arenas EJ, *et al.* 2021. *Nat Commun.* 12:1237. [PubMed](#)
4. NULL, *et al.* 2022. *Cell.* 185:916. [PubMed](#)
5. Xiao R, *et al.* 2022. *Nat Commun.* 13:4661. [PubMed](#)
6. Celis-Gutierrez J *et al.* 2019. *Cell Rep.* 27(11):3315-3330. [PubMed](#)
7. Mackroth M, *et al.* 2016. *PLoS Pathog.* 12:e1005909. [PubMed](#)
8. Gerrick KY, *et al.* 2018. *PLoS One.* 13:e0208602. [PubMed](#)
9. Leylek R, *et al.* 2020. *Cell Rep.* 32:108180. [PubMed](#)

## RRID

AB\_10899567 (BioLegend Cat. No. 305221)  
AB\_2564407 (BioLegend Cat. No. 305222)

## Antigen Details

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<b>Structure</b>	Ig superfamily, type I transmembrane glycoprotein, 60 kD
<b>Distribution</b>	Activated B cells and T cells, macrophages, and dendritic cells
<b>Function</b>	T cell costimulation
<b>Ligand/Receptor</b>	CD28, CD152 (CTLA-4)
<b>Cell Type</b>	B cells, Dendritic cells, Macrophages, T cells, Tregs
<b>Biology Area</b>	Cell Biology, Costimulatory Molecules, Immunology, Neuroscience, Neuroscience Cell Markers
<b>Molecular Family</b>	CD Molecules, Immune Checkpoint Receptors
<b>Antigen References</b>	<ol style="list-style-type: none"><li>1. Freeman G, <i>et al.</i> 1991. <i>J. Exp. Med.</i> 174:625.</li><li>2. Linsley P, <i>et al.</i> 1996. <i>Immunity</i> 4:535.</li><li>3. Linsley P, <i>et al.</i> 1991. <i>J. Exp. Med.</i> 174:561.</li></ol>
<b>Gene ID</b>	<a href="#">941</a>

## Related Protocols

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[Cell Surface Flow Cytometry Staining Protocol](#)

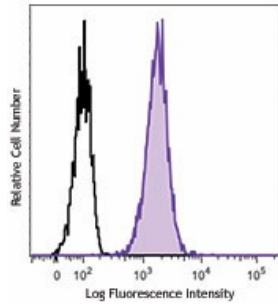
## Other Formats

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Biotin anti-human CD80, FITC anti-human CD80, PE anti-human CD80, PE/Cyanine5 anti-human CD80, Purified anti-human CD80, Alexa Fluor® 488 anti-human CD80, Alexa Fluor® 647 anti-human CD80, PE/Cyanine7 anti-human CD80, APC anti-human CD80, Brilliant Violet 650™ anti-human CD80, Brilliant Violet 421™ anti-human CD80, Brilliant Violet 605™ anti-human CD80, PE/Dazzle™ 594 anti-human CD80, PerCP/Cyanine5.5 anti-human CD80, Brilliant Violet 510™ anti-human CD80, Brilliant Violet 711™ anti-human CD80, Brilliant Violet 785™ anti-human CD80, TotalSeq™-A0005 anti-human CD80, TotalSeq™-B0005 anti-human CD80, TotalSeq™-C0005 anti-human CD80, Ultra-LEAF™ Purified anti-human CD80, Brilliant Violet 750™ anti-human CD80, TotalSeq™-D0005 anti-human CD80

## Product Data

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Human B-cell Burkitt's lymphoma cell line Raji was stained with CD80 (clone 2D10) Brilliant Violet 421™ (filled histogram) or mouse IgG1,  $\kappa$  Brilliant Violet 421™ isotype control (open histogram).

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