

Brilliant Violet 605™ anti-human CD86 Antibody

Catalog# / Size	305429 / 25 tests 305430 / 100 tests
Clone	IT2.2
Regulatory Status	RUO
Workshop	VI CD86.8
Other Names	B7-2, B70
Isotype	Mouse IgG2b, κ
Description	CD86 is an 80 kD immunoglobulin superfamily member also known as B7-2, B70, and Ly-58. CD86 is expressed on activated B and T cells, monocytes/macrophages, dendritic cells, and astrocytes. CD86, along with CD80, is the ligand of CD28 and CD152 (CTLA-4). CD86 is expressed earlier in the immune response than CD80. CD86 has also been shown to be involved in immunoglobulin class-switching and triggering of NK cell-mediated cytotoxicity. CD86 binds to CD28 to transduce costimulatory signals for T cell activation, proliferation, and cytokine production. CD86 can bind to CD152 as well, also known as CTLA-4, to deliver an inhibitory signal to T cells.

Product Details

Verified Reactivity	Human, Cynomolgus, Rhesus
Reported Reactivity	African Green, Baboon, Capuchin Monkey, Common Marmoset, Cotton-topped Tamarin, Chimpanzee
Antibody Type	Monoclonal
Host Species	Mouse
Formulation	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and BSA (origin USA).
Preparation	The antibody was purified by affinity chromatography and conjugated with Brilliant Violet 605™ under optimal conditions.
Concentration	Lot-specific (to obtain lot-specific concentration, please enter the lot number in our Concentration and Expiration Lookup or Certificate of Analysis online tools.)
Storage & Handling	The antibody solution should be stored undiluted between 2°C and 8°C, and protected from prolonged exposure to light. 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 5 µl per million cells in 100 µl staining volume or 5 µl per 100 µl of whole blood. Brilliant Violet 605™ excites at 405 nm and emits at 603 nm. The bandpass filter 610/20 nm is recommended for detection, although filter optimization may be required depending on other fluorophores used. Be sure to verify that your cytometer configuration and software setup are appropriate for detecting this channel. Refer to your instrument manual or manufacturer for support. Brilliant Violet 605™ is a trademark of Sirigen Group Ltd. Learn more about Brilliant Violet™.
Excitation Laser	Violet Laser (405 nm)

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Application Notes Additional reported applications (for the relevant formats) include: immunohistochemical staining of acetone-fixed frozen tissue sections⁶, Western blotting³, and blocking of T cell activation^{2,4,5}. The Ultra-LEAF™ purified antibody (Endotoxin < 0.01 EU/μg, Azide-Free, 0.2 μm filtered) is recommended for functional assays (Cat. Nos. 305449 & 305450).

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. (Block)
3. Esser M, *et al.* 2001. *J. Virol.* 75:6173. (WB)
4. Jeannin P, *et al.* 1999. *J. Immunol.* 162:2044. (Block)
5. Kapsogeorgou EK, *et al.* 2001. *J. Immunol.* 166:3107. (Block)
6. Geissmann F, *et al.* 2001. *Blood* 97:1241. (IHC)

Product Citations

1. Lewis SA, *et al.* 2021. *Front Immunol.* 12:724015. [PubMed](#)
2. Mulder K, *et al.* 2021. *Immunity.* 54(8):1883-1900.e5. [PubMed](#)
3. Warmuth S, *et al.* 2022. *Oncoimmunology.* 10:2004661. [PubMed](#)
4. Sureshchandra S, *et al.* 2021. *iScience.* 24:102690. [PubMed](#)
5. Sureshchandra S, *et al.* 2022. *Cell Rep.* 39:110938. [PubMed](#)
6. Richardson JR, *et al.* 2018. *Front Immunol.* 2.182638889. [PubMed](#)
7. Chakraborty M, *et al.* 2021. *Cell Reports.* 34(2):108609. [PubMed](#)
8. Zimmerman MG, *et al.* 2018. *Cell Host Microbe.* 24:731. [PubMed](#)
9. Zhu YP *et al.* 2018. *Cell reports.* 24(9):2329-2341. [PubMed](#)
10. Kubala MH, *et al.* 2018. *Cell Rep.* 25:2177. [PubMed](#)

RRID

AB_11203889 (BioLegend Cat. No. 305429)
AB_2563824 (BioLegend Cat. No. 305430)

Antigen Details

Structure	Ig superfamily, single-chain transmembrane glycoprotein, 80 kD
Distribution	Monocytes/macrophages, activated B cells and T cells, dendritic cells
Function	T cell costimulation
Ligand/Receptor	CD28, CD152
Cell Type	B cells, Dendritic cells, Macrophages, Monocytes, T cells, Tregs
Biology Area	Cell Biology, Costimulatory Molecules, Immunology, Neuroscience, Neuroscience Cell Markers
Molecular Family	CD Molecules, Immune Checkpoint Receptors
Antigen References	1. Hathcock K, <i>et al.</i> 1996. <i>Adv. Immunol.</i> 62:131. 2. June C, <i>et al.</i> 1994. <i>Immunol. Today</i> 15:321.
Gene ID	942

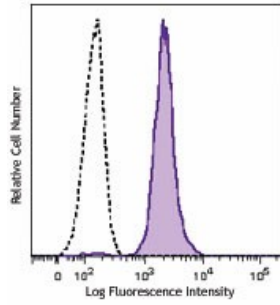
Related Protocols

[Cell Surface Flow Cytometry Staining Protocol](#)

Other Formats

Biotin anti-human CD86, PE anti-human CD86, PE/Cyanine5 anti-human CD86, Purified anti-human CD86, APC anti-human CD86, Alexa Fluor® 488 anti-human CD86, Alexa Fluor® 647 anti-human CD86, Pacific Blue™ anti-human CD86, PE/Cyanine7 anti-human CD86, PerCP/Cyanine5.5 anti-human CD86, Brilliant Violet 421™ anti-human CD86, Brilliant Violet 650™ anti-human CD86, Brilliant Violet 605™ anti-human CD86, Brilliant Violet 510™ anti-human CD86, PE/Dazzle™ 594 anti-human CD86, Purified anti-human CD86 (Maxpar® Ready), Brilliant Violet 711™ anti-human CD86, Brilliant Violet 785™ anti-human CD86, TotalSeq™-A0006 anti-human CD86, TotalSeq™-B0006 anti-human CD86, TotalSeq™-C0006 anti-human CD86, Ultra-LEAF™ Purified anti-human CD86, KIRAVIA Blue 520™ anti-human CD86, TotalSeq™-D0006 anti-human CD86, PE/Fire™ 810 anti-human CD86, PE/Fire™ 640 anti-human CD86

Product Data



Human peripheral blood monocytes were stained with CD86 (clone IT2.2) Brilliant Violet 605™ (filled histogram) or mouse IgG2b, κ Brilliant Violet 605™ isotype control (open histogram).

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