Brilliant Violet 650™ anti-mouse CD86 Antibody

Catalog# / Size	105035 / 125 µL 105036 / 50 µg
Clone	GL-1
Regulatory Status	RUO
Other Names	B7-2, B70, Ly-58
Isotype	Rat IgG2a, 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, macrophages, dendritic cells, and astrocytes. CD86, along with CD80, is a 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 co-stimulatory signals for T cell activation, proliferation, and cytokine production. CD86 can also bind to CD152, also known as CTLA-4, to deliver an inhibitory signal to T cells.

Product Details

Verified Reactivity	Mouse
Antibody Type	Monoclonal
Host Species	Rat
Immunogen	LPS-activated CBA/Ca mouse splenic B cells
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 650™ under optimal conditions.
Concentration	µg size: 0.2 mg/mL µL size: 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 using the µl size, 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. For flow cytometric staining using the µg size, the suggested use of this reagent is ≤0.25 µg per million cells in 100 µl volume. It is recommended that the reagent be titrated for optimal performance for each application. Brilliant Violet 650™ excites at 405 nm and emits at 645 nm. The bandpass filter 660/20 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 650™ is a trademark of Sirigen Group Ltd. Learn more about Brilliant Violet™. 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.
Excitation Laser	Violet Laser (405 nm)

Application Notes	The GL-1 antibody can block the mixed lymphocyte reaction *in vitro* and has been shown to inhibit the priming of cytotoxic T lymphocytes *in vivo* (along with antibodies against B7-1). Additional reported applications (for the relevant formats) include: immunoprecipitation[1], immunohistochemical staining of acetone-fixed frozen sections[2,6], immunofluorescence microscopy, and *in vivo* and *in vitro* blocking of T cell responses[1-6]. GL-1 is not suitable for immunohistochemical staining of formalin-fixed paraffin sections. The Ultra-LEAF™ purified antibody (Endotoxin < 0.01 EU/µg, Azide-Free, 0.2 µm filtered) is recommended for functional assays (Cat. No. 105051-105056).

Application References

(PubMed link indicates BioLegend citation)

1. Hathcock KS, *et al.* 1993. *Science* 262:905. (Block, IP)
2. Inaba KM, *et al.* 1994. *J. Exp. Med.* 180:1849. (Block, IHC)
3. Hathcock KS, *et al.* 1994. *J. Exp. Med.* 180:631. (Block)
4. Krummel MF, *et al.* 1995. *J. Exp. Med.* 182:459. (Block)
5. Liu Y, *et al.* 1997. *J. Exp. Med.* 185:251. (Block)
6. Herold KC, *et al.* 1997. *J. Immunol.* 158:984. (Block, IHC)
7. Shih FF, *et al.* 2006. *J. Immunol.* 176:3438. (FC)
8. Lawson BR, *et al.* 2007. *J. Immunol.* 178:5366.
9. Turnquist HR, *et al.* 2007. *J. Immunol.* 178:7018.
10. Klinger MB, *et al.* 2007. *Am. J. Physiol. Requl. Integr. Comp. Physiol.* 293:R677. PubMed
11. de Verteuil DA, *et al.* 2014. *J Immunol.* 193:1121. PubMed

Product Citations

1. Turner JA, *et al.* 2020. Immunity. 53:1202. PubMed
2. Sepe JJ, *et al.* 2022. JACC Basic Transl Sci. 7:915. PubMed
3. Findlay EG, *et al.* 2019. Oncoimmunology. 8:1608106. PubMed
4. Naing A *et al.* 2019. Cell reports. 26(5):1242-1257 . PubMed
5. Harb H, *et al.* 2021. Immunity. 54(6):1186-1199.e7. PubMed
6. Lucas B, *et al.* 2020. Nat Commun. 11:2198. PubMed
7. Henrich IC, *et al.* 2021. Cancer Res. 81:2171. PubMed
8. Suan D *et al.* 2017. Immunity. 47(6):1142-1153 . PubMed
9. Kim DK, *et al.* 2022. Nat Commun. 13:6292. PubMed
10. Soukup K, *et al.* 2017. Sci Rep. 10.1038/s41598-017-12208-7. PubMed
11. Ren S, *et al.* 2022. Int J Biol Sci. 18:166. PubMed
12. Wang R, *et al.* 2022. J Immunother Cancer. 10:. PubMed

RRID

AB_11126147 (BioLegend Cat. No. 105035)
AB_2686973 (BioLegend Cat. No. 105036)

Antigen Details

Structure	Ig superfamily, 80 kD
Distribution	B cells and T cells (upregulated upon activation), macrophages, dendritic cells, and astrocytes
Function	T cell costimulation, Ig class-switching, NK cell cytotoxicity
Ligand/Receptor	CD28, CD152 (CTLA-4)
Cell Type	Astrocytes, B cells, Dendritic cells, Macrophages, T cells, Tregs
Biology Area	Cell Biology, Costimulatory Molecules, Immunology, Neuroscience, Neuroscience Cell Markers
Molecular Family	CD Molecules, Immune Checkpoint Receptors

Antigen References

1. Barclay A, *et al.* 1997. The Leukocyte Antigen FactsBook Academic Press.
2. Hathcock KS, *et al.* 1993. *Science* 262:905.
3. Freeman GJ, *et al.* 1993. *Science* 262:907.
4. Carreno BM, *et al.* 2002. *Annu. Rev. Immunol.* 20:29.

Gene ID 12524

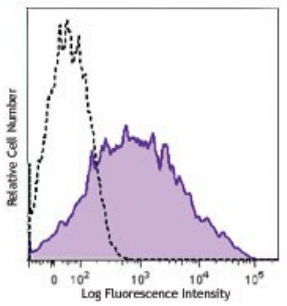
Related Protocols

Cell Surface Flow Cytometry Staining Protocol

Other Formats

Brilliant Violet 650™ anti-mouse CD86, Biotin anti-mouse CD86, FITC anti-mouse CD86, PE anti-mouse CD86, Purified anti-mouse CD86, Brilliant Violet 605™ anti-mouse CD86, APC anti-mouse CD86, PE/Cyanine7 anti-mouse CD86, Alexa Fluor® 488 anti-mouse CD86, Alexa Fluor® 647 anti-mouse CD86, Pacific Blue™ anti-mouse CD86, PE/Cyanine5 anti-mouse CD86, Alexa Fluor® 700 anti-mouse CD86, PerCP/Cyanine5.5 anti-mouse CD86, PerCP anti-mouse CD86, APC/Cyanine7 anti-mouse CD86, Brilliant Violet 421™ anti-mouse CD86, Brilliant Violet 510™ anti-mouse CD86, PE/Dazzle™ 594 anti-mouse CD86, Brilliant Violet 785™ anti-mouse CD86, APC/Fire™ 750 anti-mouse CD86, TotalSeq™-A0200 anti-mouse CD86, TotalSeq™-B0200 anti-mouse CD86, Ultra-LEAF™ Purified anti-mouse CD86, TotalSeq™-C0200 anti-mouse CD86

Product Data



LPS-stimulated (3 days) C57BL/6 mouse splenocytes were stained with GL-1 Brilliant Violet 650™.

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