FITC anti-mouse CD86 Antibody

Catalog# / Size	105005 / 50 µg 105006 / 500 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.
Preparation	The antibody was purified by affinity chromatography, and conjugated with FITC under optimal conditions.
Concentration	0.5 mg/ml
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 ≤ 1.0 µg per 10^6 cells in 100 µl volume. It is recommended that the reagent be titrated for optimal performance for each application.
Excitation Laser	Blue Laser (488 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. Kawai H, *et al.* 2021. Asian Pac J Allergy Immunol. :. PubMed
2. Jin SM, *et al.* 2023. Nat Nanotechnol. :. PubMed
3. Lombard-Vadnais F, *et al.* 2023. iScience. 26:105852. PubMed
4. Han J, *et al.* 2023. Front Microbiol. 13:1067725. PubMed
5. Grenov A, *et al.* 2022. Cell Rep. 39:110778. PubMed
6. Akhtar MN, *et al.* 2022. MBio. 13:e0330921. PubMed
7. Ou W, *et al.* 2023. Nat Commun. 14:392. PubMed
8. Do-Thi VA, *et al.* 2023. Cancer Res Commun. 3:80. PubMed
9. Lu Y, *et al.* 2023. J Transl Med. 21:339. PubMed
10. Kim EH, *et al.* 2020. Elife. 9:00. PubMed
11. Nocera D, *et al.* 2016. J Immunol. 196: 2860 - 2869. PubMed
12. Rezende R, *et al.* 2015. Nat Commun. 6: 8726. PubMed

RRID

AB_313148 (BioLegend Cat. No. 105005)
AB_313149 (BioLegend Cat. No. 105006)

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

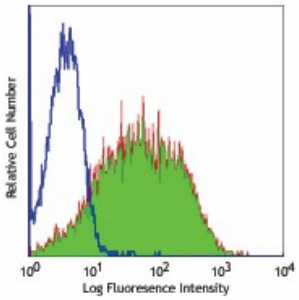
- Cell Surface Flow Cytometry Staining Protocol

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, Spark Blue™ 574 anti-mouse CD86 (Flexi-Fluor™), Spark PLUS B550™ anti-mouse CD86

Product Data



LPS-stimulated (3 days) C57BL/6 mouse splenocytes stained with GL-1 FITC

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