

## Alexa Fluor® 647 anti-mouse CD86 Antibody

<b>Catalog# / Size</b>	105019 / 25 µg 105020 / 100 µg
<b>Clone</b>	GL-1
<b>Regulatory Status</b>	RUO
<b>Other Names</b>	B7-2, B70, Ly-58
<b>Isotype</b>	Rat IgG2a, κ
<b>Description</b>	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

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<b>Verified Reactivity</b>	Mouse
<b>Antibody Type</b>	Monoclonal
<b>Host Species</b>	Rat
<b>Immunogen</b>	LPS-activated CBA/Ca mouse splenic B cells
<b>Formulation</b>	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.
<b>Preparation</b>	The antibody was purified by affinity chromatography and conjugated with Alexa Fluor® 647 under optimal conditions.
<b>Concentration</b>	0.5 mg/ml
<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 ≤ 0.25 µg per 10 <sup>6</sup> cells in 100 µl volume. It is recommended that the reagent be titrated for optimal performance for other applications.  * Alexa Fluor® 647 has a maximum emission of 668 nm when it is excited at 633nm / 635nm.  Alexa Fluor® and Pacific Blue™ are trademarks of Life Technologies Corporation.  <a href="#">View full statement regarding label licenses</a>
<b>Excitation Laser</b>	Red Laser (633 nm)
<b>Application Notes</b>	The GL-1 antibody can block the mixed lymphocyte reaction <i>in vitro</i> and has been shown to inhibit the priming of cytotoxic T lymphocytes <i>in vivo</i> (along with antibodies against B7-1). Additional reported applications (for the relevant formats) include: immunoprecipitation <sup>1</sup> , immunohistochemical staining of acetone-fixed frozen sections <sup>2,6</sup> , immunofluorescence microscopy, and <i>in vivo</i> and <i>in vitro</i> blocking of T cell responses <sup>1-6</sup> . 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

1. Hathcock KS, *et al.* 1993. *Science* 262:905. (Block, IP)

(PubMed link indicates BioLegend citation)

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

#### Product Citations

1. Li C, *et al.* 2022. *Nat Immunol.* 23:543. [PubMed](#)
2. Ma Y, *et al.* 2014. *Cancer Res.* 74:436. [PubMed](#)
3. Turner JS *et al.* 2018. *Cell reports.* 25(6):1395-1403. [PubMed](#)
4. Hsu SPC, *et al.* 2020. *J Neurooncol.* 146:417. [PubMed](#)
5. Chen J *et al.* 2018. *Cell reports.* 25(12):3393-3404. [PubMed](#)
6. Yang H, *et al.* 2015. *Cancer Res.* 75: 3812-3822. [PubMed](#)
7. Li X, *et al.* 2015. *J Immunol.* 195: 2710-2721. [PubMed](#)
8. Sharma S, *et al.* 2015. *J Immunol.* 194:5529. [PubMed](#)
9. Mintz MA, *et al.* 2019. *Immunity.* 51:310. [PubMed](#)
10. Grigoryan L, *et al.* 2022. *NPJ Vaccines.* 7:55. [PubMed](#)
11. Catani J, *et al.* 2016. *Transl Oncol.* 9:565-574. [PubMed](#)
12. Verhagen J, *et al.* 2013. *Proc Natl Acad Sci U S A.* 110:E221. [PubMed](#)
13. Lindhorst A, *et al.* 2021. *Cell Death Dis.* 12:579. [PubMed](#)
14. Madsen CS, *et al.* 2022. *Commun Biol.* 5:888. [PubMed](#)
15. Chmielewski M and Abken H 2017. *Cell Rep.* 10.1016/j.celrep.2017.11.063. [PubMed](#)
16. Lee A, *et al.* 2022. *Nat Commun.* 13:549. [PubMed](#)

#### RRID

AB\_493465 (BioLegend Cat. No. 105019)  
AB\_493464 (BioLegend Cat. No. 105020)

## Antigen Details

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<b>Structure</b>	Ig superfamily, 80 kD
<b>Distribution</b>	B cells and T cells (upregulated upon activation), macrophages, dendritic cells, and astrocytes
<b>Function</b>	T cell costimulation, Ig class-switching, NK cell cytotoxicity
<b>Ligand/Receptor</b>	CD28, CD152 (CTLA-4)
<b>Cell Type</b>	Astrocytes, 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. Barclay A, <i>et al.</i> 1997. <i>The Leukocyte Antigen FactsBook</i> Academic Press.</li><li>2. Hathcock KS, <i>et al.</i> 1993. <i>Science</i> 262:905.</li><li>3. Freeman GJ, <i>et al.</i> 1993. <i>Science</i> 262:907.</li><li>4. Carreno BM, <i>et al.</i> 2002. <i>Annu. Rev. Immunol.</i> 20:29.</li></ol>
<b>Gene ID</b>	<a href="#">12524</a>

## Related Protocols

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[Cell Surface Flow Cytometry Staining Protocol](#)

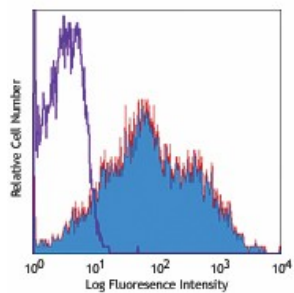
## Other Formats

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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

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LPS-stimulated (3 days) C57BL/6 mouse splenocytes stained with GL-1 Alexa Fluor® 647

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