

Brilliant Violet 711™ anti-mouse IL-2 Antibody

Catalog# / Size	503837 / 50 µg
Clone	JES6-5H4
Regulatory Status	RUO
Other Names	Interleukin-2, T cell growth factor (TCGF), Eosinophil differentiation factor (EDF), Killer cell helper factor (KHF), Macrophage-activating factor for cytotoxicity I (MAF-C I), Thymocyte differentiation factor (TDF)
Isotype	Rat IgG2b, κ
Description	IL-2 is a potent lymphoid cell growth factor which exerts its biological activity primarily on T cells. Additionally, IL-2 has been found to stimulate growth and differentiation of B cells, NK cells, LAK cells, monocytes, and oligodendrocytes.

Product Details

Verified Reactivity	Mouse
Antibody Type	Monoclonal
Host Species	Rat
Immunogen	<i>E. coli</i> -expressed, recombinant mouse IL-2
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 711™ under optimal conditions.
Concentration	0.2 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	ICFC - Quality tested
Recommended Usage	<p>Each lot of this antibody is quality control tested by intracellular immunofluorescent staining with flow cytometric analysis. For flow cytometric staining, the suggested use of this reagent is ≤0.5 µg per million cells in 100 µl volume. It is recommended that the reagent be titrated for optimal performance for each application.</p> <p>Brilliant Violet 711™ excites at 405 nm and emits at 711 nm. The bandpass filter 710/50 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 711™ is a trademark of Sirigen Group Ltd.</p> <p>Learn more about Brilliant Violet™.</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>
Excitation Laser	Violet Laser (405 nm)
Application Notes	<p>ELISA Detection¹⁻³ or ELISPOT Detection⁴⁻⁶. The biotinylated JES6-5H4 antibody is useful as a detection antibody for a sandwich ELISA or ELISPOT assay, when used in conjunction with the purified JES6-1A12 antibody (Cat. Nos. 503701 & 503702) as capture antibody and recombinant mouse IL-2 (Cat. No. 575409) as the standard.</p> <p>Flow Cytometry⁸⁻¹⁰. The fluorochrome-labeled JES6-5H4 antibody is useful for intracellular immunofluorescent staining and flow cytometric analysis to identify IL-2 -producing cells within</p>

mixed cell populations.

Neutralization^{1,7}: The Ultra-LEAF™ purified antibody (Endotoxin *in vivo* and *in vitro* (Cat. No. 503845-503850)) is recommended for neutralization.

Additional reported applications (for the relevant formats) include: immunoprecipitation¹, immunohistochemical staining of paraformaldehyde-fixed, saponin-treated frozen tissue sections², *in vivo* capture⁷, and immunocytochemistry.

Note: For testing mouse IL-2 in serum, plasma or supernatant, BioLegend's ELISA MAX™ Sets (Cat. No. 431001 & 431004) are specially developed and recommended.

Application References

(PubMed link indicates BioLegend citation)

1. Abrams J, *et al.* 1992. *Immunol. Rev.* 127:5.
2. Sander B, *et al.* 1993. *J. Immunol. Meth.* 166:201.
3. Abrams J. 1995. *Curr. Prot. Immunol.* John Wiley and Sons New York. Unit 6.20.
4. Klinman D, *et al.* 1994. *Curr. Prot. Immunol.* John Wiley and Sons New York. Unit 6.19.
5. Mo X, *et al.* 1995. *J. Virol.* 69:1288.
6. Karulin A, *et al.* 2000. *J. Immunol.* 164:1862.
7. Finkelman F, *et al.* 2003. *Curr. Prot. Immunol.* John Wiley & Sons New York. Unit 6.28.
8. Ko SY, *et al.* 2005. *J. Immunol.* 175:3309. [PubMed](#)
9. Kang SS and Allen PM. 2005. *J. Immunol.* 174:5382.
10. Lawson BR, *et al.* 2007. *J. Immunol.* 178:5366.

Product Citations

1. Elong Ngono A, *et al.* 2020. *Cell Reports.* 1.330555556. [PubMed](#)
2. Wen J, *et al.* 2020. *Cell Rep.* 31:107566. [PubMed](#)
3. Garcia-Dominguez D, *et al.* 2022. *Front Immunol.* 13:948335. [PubMed](#)
4. Shen H, *et al.* 2022. *Nat Commun.* 13:5013. [PubMed](#)

RRID

AB_2564225 (BioLegend Cat. No. 503837)

Antigen Details

Structure	Cytokine; 15-30 kD (Mammalian)
Bioactivity	Proliferation of T lymphocytes, B cells, anti-inflammatory, hematopoiesis, tumor surveillance
Cell Sources	T cells
Cell Targets	T cells, B cells, NK cells, LAK cells, monocytes, macrophages, oligodendrocytes
Receptors	High affinity heterotrimer of IL-2R α / β / γ , intermediate affinity homodimer IL-2R α (CD25; p55; Tac) and heterodimer IL-2R β (CD122)/ γ ; γ -subunit (CD132) in common with IL-4R, IL-7R, IL-13R, IL-15R
Cell Type	Tregs
Biology Area	Immunology
Molecular Family	Cytokines/Chemokines
Antigen References	<ol style="list-style-type: none">1. Fitzgerald K, <i>et al.</i> Eds. 2001. <i>The Cytokine FactsBook.</i> Academic Press San Diego.2. Taniguchi T, <i>et al.</i> 1993. <i>Cell</i> 73:5.3. Nistico G. 1993. <i>Prog. Neurobiol.</i> 40:463.4. Waldmann T, <i>et al.</i> 1993. <i>Ann. NY Acad. Sci.</i> 685:603.
Regulation	Upregulated by NFAT; downregulated by TCF-8, CIF (colostrum inhibitory factor)
Gene ID	16183

Related Protocols

[Surface and Intracellular Cytokine Staining for Flow Cytometry - Video](#)

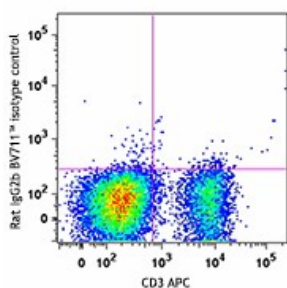
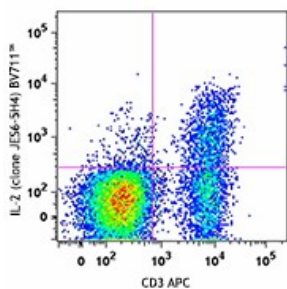
[Intracellular Flow Cytometry Staining Protocol](#)

Other Formats

APC anti-mouse IL-2, Biotin anti-mouse IL-2, FITC anti-mouse IL-2, PE anti-mouse IL-2, Purified anti-mouse IL-2, Alexa Fluor® 488 anti-mouse IL-2, Alexa Fluor® 647 anti-mouse IL-2, Alexa Fluor® 700 anti-mouse IL-2, Pacific Blue™ anti-mouse IL-2,

PerCP/Cyanine5.5 anti-mouse IL-2, PE/Cyanine5 anti-mouse IL-2, Brilliant Violet 421™ anti-mouse IL-2, Brilliant Violet 605™ anti-mouse IL-2, PE/Cyanine7 anti-mouse IL-2, Brilliant Violet 510™ anti-mouse IL-2, Purified anti-mouse IL-2 (Maxpar® Ready), Brilliant Violet 711™ anti-mouse IL-2, PE/Dazzle™ 594 anti-mouse IL-2, APC/Fire™ 750 anti-mouse IL-2, Brilliant Violet 785™ anti-mouse IL-2

Product Data



PMA+Ionomycin-stimulated (6 hours) C57BL/6 mouse splenocytes (in the presence of Brefeldin A) were stained with CD3 APC, fixed, permeabilized and then stained with IL-2 (clone JES6-5H4) Brilliant Violet 711™ (top) or rat IgG2b, κ Brilliant Violet 711™ isotype control (bottom).

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