

Brilliant Violet 421™ anti-human IL-2 Antibody

Catalog# / Size	500327 / 25 tests 500328 / 100 tests
Clone	MQ1-17H12
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 IgG2a, κ
Description	IL-2 is a potent lymphoid cell growth factor which exerts its biological activity primarily on T cells, promoting proliferation and maturation. 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	Human
Reported Reactivity	Cat, Chimpanzee, Baboon, Cynomolgus, Rhesus, Sooty Mangabey
Antibody Type	Monoclonal
Host Species	Rat
Immunogen	<i>E. coli</i> - expressed recombinant human 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 421™ 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	ICFC - Quality tested
Recommended Usage	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 5 µl per million cells in 100 µl staining volume or 5 µl per 100 µl of whole blood. Brilliant Violet 421™ excites at 405 nm and emits at 421 nm. The standard bandpass filter 450/50 nm is recommended for detection. Brilliant Violet 421™ is a trademark of Sirigen Group Ltd. Learn more about Brilliant Violet™.

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Excitation Laser Violet Laser (405 nm)

Application Notes **ELISA or ELISPOT Capture^{2,3}:** The purified MQ1-17H12 antibody is useful as the capture antibody in a sandwich ELISA or ELISPOT assay, when used in conjunction with the Biotin anti-human IL-2 antibody (Cat. No. 517605) as the detecting antibody. The Ultra-LEAF™ purified antibody is suggested for ELISPOT capture. For ELISPOT capture applications, a concentration range of 4.0 - 8.0 µg/mL is recommended.
Additional reported applications (for the relevant formats) include: immunoprecipitation²,

immunohistochemical staining of paraformaldehyde-fixed, saponin-treated frozen tissue sections^{1,4-6,8}, neutralization¹³, and immunocytochemistry.

Note: For testing human IL-2 in serum or plasma, BioLegend's LEGEND MAX™ Kit (Cat. No. 431807) is specially developed and recommended.

Clone MQ1-17H12 cross-reacts to Cat¹⁵

Application References

(PubMed link indicates BioLegend citation)

1. Andersson J, *et al.* 1994. *Immunology* 83:16. (IHC)
2. Abrams J, *et al.* 1992. *Immunol. Rev.* 127:5. (IP)
3. Abrams JS. 1995. *Curr. Prot. Immunol.* Unit 6.20.
4. Fernandez V, *et al.* 1994. *Eur. J. Immunol.* 24:1808. (IHC)
5. Skansen-Saphir U, *et al.* 1994. *Eur. J. Immunol.* 24:916. (IHC)
6. Andersson U, *et al.* *Detection and Quantification of Gene Expression*. New York:Springer-Verlag. (IHC)
7. Prussin C, *et al.* 1995. *J. Immunol. Methods.* 188:117.
8. Raqib R, *et al.* 2002. *Infect. Immun.* 70:3199. (IHC)
9. Dzhagalov I, *et al.* 2007. *J. Immunol.* 178:2113. [PubMed](#)
10. Colleton BA, *et al.* 2009. *J Virol.* 83:6288. [PubMed](#)
11. Yoshino N, *et al.* 2000. *Exp. Anim. (Tokyo)* 49:97. (FC)
12. Rout N, *et al.* 2010. *PLoS One* 5:e9787. (FC)
13. Yeap SK, *et al.* 2013. *BMC Complement Altern. Med.* 13:145. (Neut)
14. Wu Z, *et al.* 2015. *J Virol.* 89:6435. [PubMed](#)
15. Maksaarekul S, *et al.* 2009. *Vaccine.* 28:3754 (FC) [PubMed](#)

Product Citations

1. Dillinger B, *et al.* 2017. *Front Immunol.* 10.3389/fimmu.2017.01152. [PubMed](#)
2. Schreurs RRCE, *et al.* 2019. *Immunity.* 50:462. [PubMed](#)
3. Boyle M, *et al.* 2015. *J Infect Dis.* 212: 416-425. [PubMed](#)
4. Holokai L, *et al.* 2020. *Cancers (Basel).* 12:00. [PubMed](#)
5. Peng Y, *et al.* 2020. *Nat Immunol.* 1.802777778. [PubMed](#)

RRID

AB_10897949 (BioLegend Cat. No. 500327)
AB_10962947 (BioLegend Cat. No. 500328)

Antigen Details

Structure	Cytokine; 15.4 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	Cell Biology, Immunology, Neuroinflammation, Neuroscience
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 and CIF (colostrums inhibitory factor)
Gene ID	3558

Related Protocols

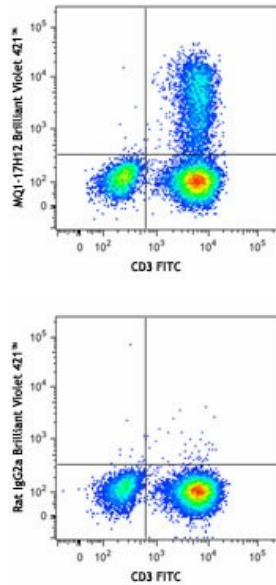
[Intracellular Cytokine Staining Protocol - Video](#)

[Intracellular Flow Cytometry Staining Protocol](#)

Other Formats

APC anti-human IL-2, FITC anti-human IL-2, PE anti-human IL-2, Purified anti-human IL-2, Alexa Fluor® 488 anti-human IL-2, Alexa Fluor® 647 anti-human IL-2, Alexa Fluor® 700 anti-human IL-2, PerCP/Cyanine5.5 anti-human IL-2, Pacific Blue™ anti-human IL-2, PE/Cyanine7 anti-human IL-2, Brilliant Violet 421™ anti-human IL-2, Brilliant Violet 605™ anti-human IL-2, Brilliant Violet 650™ anti-human IL-2, Brilliant Violet 510™ anti-human IL-2, Brilliant Violet 711™ anti-human IL-2, APC/Cyanine7 anti-human IL-2, Purified anti-human IL-2 (Maxpar® Ready), PE/Dazzle™ 594 anti-human IL-2, Brilliant Violet 785™ anti-human IL-2, PerCP anti-human IL-2, APC/Fire™ 750 anti-human IL-2, Ultra-LEAF™ Purified anti-human IL-2

Product Data



Human peripheral blood lymphocytes were stimulated with PMA + Ionomycin for 6 hours (in the presence of monensin), surface stained with CD3 FITC, fixed, permeabilized, and then stained with IL-2 (clone MQ1-17H12) Brilliant Violet 421™ (top) or rat IgG2a, κ Brilliant Violet 421™ isotype control (bottom).

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