

Technical Data Sheet

BV421 Rat Anti-Mouse IL-2

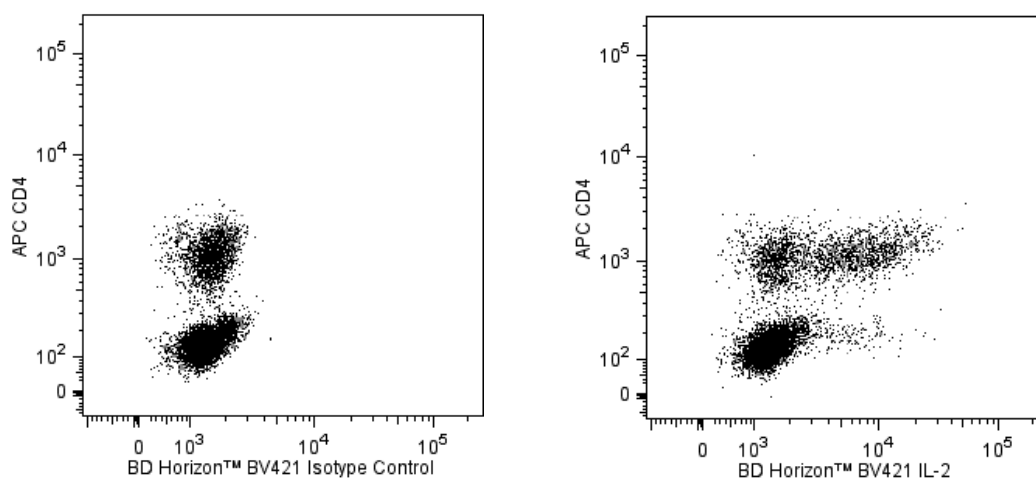
Product Information

Material Number:	562969
Alternate Name:	IL2; Interleukin-2; T-cell growth factor; TCGF
Size:	50 µg
Concentration:	0.2 mg/ml
Clone:	JES6-5H4
Immunogen:	Mouse IL-2 Recombinant Protein
Isotype:	Rat IgG2b
Reactivity:	QC Testing: Mouse
Storage Buffer:	Aqueous buffered solution containing BSA and ≤0.09% sodium azide.

Description

The JES6-5H4 monoclonal antibody specifically binds to mouse interleukin-2 (IL-2). IL-2 is a multifunctional cytokine that plays pivotal roles in immunity and tolerance. It is produced by activated T cells. IL-2 effects the activation, growth, proliferation and/or differentiation of various cell types including T and B lymphocytes and their precursors, LAK cells, NK cells, and monocytes/macrophages. IL-2 mediates its biological activities by binding to IL-2 receptor complexes. The intermediate affinity IL-2R is comprised of IL-2Rβ (CD122) and common gamma chain (γc; CD132) subunits whereas the high-affinity IL-2R is comprised of IL-2Rα (CD25), IL-2Rβ and γc subunits. The JES6-5H4 monoclonal antibody binds to IL-2 and neutralizes its biological activity.

The antibody was conjugated to BD Horizon™ BV421 which is part of the BD Horizon™ Brilliant Violet™ family of dyes. With an Ex Max of 407-nm and Em Max at 421-nm, BD Horizon™ BV421 can be excited by the violet laser and detected in the standard Pacific Blue™ filter set (eg, 450/50-nm filter). BD Horizon™ BV421 conjugates are very bright, often exhibiting a 10 fold improvement in brightness compared to Pacific Blue™ conjugates.



Two-color flow cytometric analysis of IL-2 expressed in activated CD4-positive splenocytes. MiCK-1 Mouse Cytokine Positive Control Cells (Cat No. 554652) were permeabilized using BD Perm/Wash™ Buffer (Cat. No. 554723). The permeabilized cells were stained with APC Rat Anti-Mouse CD4 (Cat. No. 553051/561091) and either BD Horizon™ BV421 Rat IgG2b Isotype Control (Cat No. 562603, Left Panel) or BD Horizon™ BV421 Rat Anti-Mouse IL-2 (Cat No. 562969, Right Panel). Two-color flow cytometric dot plots showing the correlated expression of IL-2 (or Ig Isotype control staining) versus CD4 were derived from gated events with the forward and side light-scatter characteristics of intact lymphocytes. Flow cytometric analysis was performed using a BD LSRFortessa™ Cell Analyzer System.

Preparation and Storage

Store undiluted at 4°C and protected from prolonged exposure to light. Do not freeze.

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

The antibody was conjugated with BD Horizon™ BV421 under optimum conditions, and unconjugated antibody and free BD Horizon™ BV421 were removed.

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Application Notes

Application

Intracellular staining (flow cytometry)

Routinely Tested

Suggested Companion Products

Catalog Number	Name	Size	Clone
554656	Stain Buffer (FBS)	500 ml	(none)
562603	BV421 Rat IgG2b, κ Isotype Control	50 μ g	R35-38
554652	MiCK-1 Mouse Cytokine Positive Control Cells	1.0 ml	(none)
554723	Perm/Wash Buffer	100 ml	(none)
561091	APC Rat Anti-Mouse CD4	25 μ g	RM4-5
553051	APC Rat Anti-Mouse CD4	0.1 mg	RM4-5

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
3. An isotype control should be used at the same concentration as the antibody of interest.
4. Please refer to www.bdbiosciences.com/pharming/protocols for technical protocols.
5. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
6. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.
7. Pacific Blue™ is a trademark of Molecular Probes, Inc., Eugene, OR.
8. Brilliant Violet™ 421 is a trademark of Sirigen.

References

Abrams J. Immunoenzymetric assay of mouse and human cytokines using NIP-labeled anti-cytokine antibodies. *Curr Protoc Immunol*. 2001; 1:6.20-6.21. (Clone-specific: ELISA)

Abrams JS, Roncarolo MG, Yssel H, Andersson U, Gleich GJ, Silver JE. Strategies of anti-cytokine monoclonal antibody development: immunoassay of IL-10 and IL-5 in clinical samples. *Immunol Rev*. 1992; 127:5-24. (Clone-specific: ELISA, Immunoprecipitation)

Prussin C, Metcalfe DD. Detection of intracytoplasmic cytokine using flow cytometry and directly conjugated anti-cytokine antibodies. *J Immunol Methods*. 1995; 188(1):117-128. (Methodology: Flow cytometry)

Sander B, Hoiden I, Andersson U, Moller E, Abrams JS. Similar frequencies and kinetics of cytokine producing cells in murine peripheral blood and spleen. Cytokine detection by immunoassay and intracellular immunostaining. *J Immunol Methods*. 1993; 166(2):201-214. (Clone-specific: ELISA)

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