

Technical Data Sheet

BV421 Rat Anti-Mouse CD70

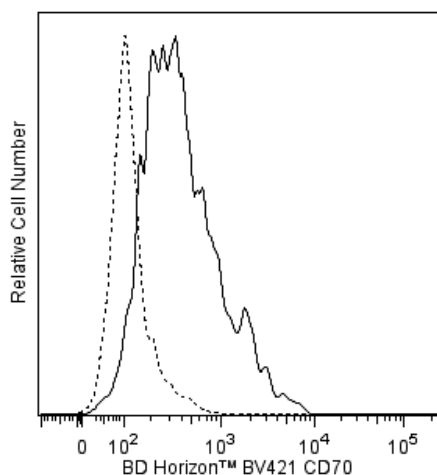
Product Information

Material Number:	562908
Alternate Name:	CD27 ligand; CD27L, CD27LG; Tnfsf7; Ki-24 Antigen
Size:	50 µg
Concentration:	0.2 mg/ml
Clone:	FR70
Immunogen:	BALB/c mouse B lymphoma A20.2J
Isotype:	Rat (F344) IgG2b, κ
Reactivity:	QC Testing: Mouse
Storage Buffer:	Aqueous buffered solution containing BSA and ≤0.09% sodium azide.

Description

The FR70 monoclonal antibody specifically binds to mouse CD70, a 30-33-kDa type-II transmembrane glycoprotein belonging to the TNF/NGF superfamily. CD70 is the ligand for CD27 and is expressed primarily on activated B cells. CD70 expression can be induced by activation of splenocytes with lipopolysaccharide and stimulatory antibodies specific for IgM, CD40 or both. mRNA coding for CD70 is transiently expressed after Concanavalin A stimulation of splenocytes or thymocytes. CD70 has been observed to be expressed on dendritic cells of *Leishmania major*-infected mice. The CD27-CD70 interaction delivers costimulatory signals to T cells and NK cells. It has been reported that FR70 antibody blocks binding of mCD27-Ig fusion protein to mouse *CD70*-transfected cells and inhibits some in vitro T-cell- and NK-cell-dependent responses.

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.



Flow cytometric analysis of CD70 expression on activated mouse splenocytes. Splenic leucocytes from a BALB/c mouse were stimulated with lipopolysaccharide (LPS; 1 µg/ml; Sigma Cat. No. L-8272) for 3 days. The activated cells were stained with BD Horizon™ BV421 Rat IgG2b, κ Isotype Control (Cat. No. 562603; dashed line histogram) or BD Horizon™ BV421 Rat Anti-Mouse CD70 antibody (Cat. No. 562908; solid line histogram). The fluorescence histograms were derived from gated events with the forward and side light-scatter characteristics of viable leucocytes. Flow cytometry was performed using a BD™ LSR II Flow Cytometer 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.

Application Notes

Application

Flow cytometry	Routinely Tested
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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

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

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Takeda K, Oshima H, Hayakawa Y, et al. CD27-mediated activation of murine NK cells. *J Immunol.* 2000; 164(4):1741-1745. (Biology)

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