

## Technical Data Sheet

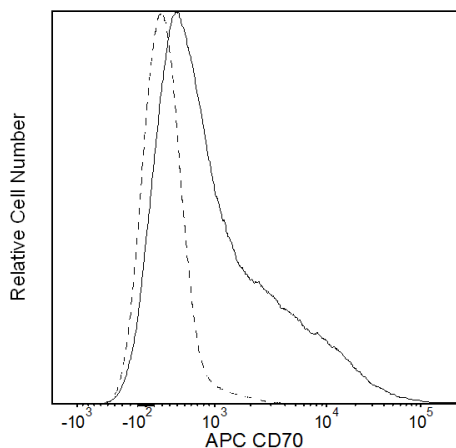
## APC Rat Anti-Mouse CD70

## Product Information

<b>Material Number:</b>	<b>563634</b>
<b>Alternate Name:</b>	CD27 ligand; CD27L, CD27LG; Tnfsf7; Ki-24 Antigen
<b>Size:</b>	100 µg
<b>Concentration:</b>	0.2 mg/ml
<b>Clone:</b>	FR70
<b>Immunogen:</b>	BALB/c mouse B lymphoma A20.2J
<b>Isotype:</b>	Rat (F344) IgG2b, κ
<b>Reactivity:</b>	QC Testing: Mouse
<b>Storage Buffer:</b>	Aqueous buffered solution containing ≤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.



**Flow cytometric analysis of CD70 expression on activated mouse splenocytes.** Mouse splenic leucocytes were stimulated with lipopolysaccharide (LPS; Sigma L-8272; 1 µg/ml) for 3 days. The activated cells were preincubated with Purified Rat Anti-Mouse CD16/CD32 antibody (Mouse BD Fc Block™) (Cat. No. 553141/553142). The cells were then stained with APC Rat IgG2b, κ Isotype Control (Cat. No. 556924; dashed line histogram) or APC Rat Anti-Mouse CD70 antibody (Cat. No. 563634; solid line histogram). The fluorescence histograms were derived from gated events with the forward and side light-scatter characteristics of viable leucocytes. Flow cytometric analysis 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 to APC under optimum conditions, and unconjugated antibody and free APC 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)
556924	APC Rat IgG2b, κ Isotype Control	0.1 mg	A95-1
553141	Purified Rat Anti-Mouse CD16/CD32 (Mouse BD Fc Block™)	0.1 mg	2.4G2
553142	Purified Rat Anti-Mouse CD16/CD32 (Mouse BD Fc Block™)	0.5 mg	2.4G2

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## Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. An isotype control should be used at the same concentration as the antibody of interest.
3. Please refer to [www.bdbiosciences.com/pharming/en/protocols](http://www.bdbiosciences.com/pharming/en/protocols) for technical protocols.
4. 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.
5. This APC-conjugated reagent can be used in any flow cytometer equipped with a dye, HeNe, or red diode laser.
6. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at [www.bdbiosciences.com/colors](http://www.bdbiosciences.com/colors).

## References

Akiba H, Miyahira Y, Atsuta M. Critical contribution of OX40 ligand to T helper cell type 2 differentiation in experimental leishmaniasis. *J Exp Med*. 2000; 191(2):375-382. (Clone-specific: Flow cytometry, In vivo exacerbation, Neutralization)

Hartwig UF, Karlsson L, Peterson PA, Webb SR. CD40 and IL-4 regulate murine CD27L expression. *J Immunol*. 1997; 159(12):6000-6008. (Clone-specific: Neutralization)

Oshima H, Nakano H, Nohara C. Characterization of murine CD70 by molecular cloning and mAb. *Int Immunol*. 1998; 10(4):517-526. (Immunogen: Blocking, Flow cytometry, Functional assay, Immunoprecipitation, Inhibition, Neutralization)

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

Tesselaar K, Gravestein LA, van Schijndel GM, Borst J, van Lier RA. Characterization of murine CD70, the ligand of the TNF receptor family member CD27. *J Immunol*. 1997; 159(10):4959-4965. (Biology)

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