

Technical Data Sheet

Biotin Rat Anti-Mouse CD70

Product Information

Material Number:	555285
Size:	0.5 mg
Concentration:	0.5 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 $\leq 0.09\%$ sodium azide.

Description

The FR70 antibody reacts with 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, anti-IgM, anti-mouse CD40 mAb HM40-3 (Cat. no. 553721) or 3/23 (Cat. no. 553787), or anti-IgM plus anti-CD40, but not Concanavalin A or immobilized anti-mouse CD3e mAb 145-2C11 (Cat. no. 553057) plus soluble anti-CD28. IL-4 may be a negative regulator of CD70 expression by B cells. *Cd70* mRNA is transiently expressed after ConA stimulation of splenocytes or thymocytes. CD70 was observed on dendritic cells of mice infected with *Leishmania major*; however, its level of expression on dendritic cells of naive mice was not reported. The CD27-CD70 interaction delivers T-cell1, and NK-cell costimulatory signals. It has been reported that FR70 mAb blocks binding of mCD27-Ig fusion protein to mCd70-transfected cells and inhibits some *in vitro* T-cell- and NK-cell-dependent responses.

Preparation and Storage

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

The antibody was conjugated with biotin under optimum conditions, and unreacted biotin was removed.

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

Application Notes

Application

Flow cytometry	Routinely Tested
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Recommended Assay Procedure:

Since this antigen is expressed at low density on the surface of activated B cells, we recommend that a "bright" second-step reagent, such as Streptavidin-PE (Cat. no. 554061), be used.

Suggested Companion Products

Catalog Number	Name	Size	Clone
553721	Purified NA/LE Hamster Anti-Mouse CD40	0.5 mg	HM40-3
553787	Purified NA/LE Rat Anti-Mouse CD40	0.5 mg	3/23
554061	PE Streptavidin	0.5 mg	(none)
553987	Biotin Rat IgG2b, κ Isotype Control	0.25 mg	A95-1

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
3. 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.

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.(Biology)

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Akiba H, Oshima H, Takeda K, et al. CD28-independent costimulation of T cells by OX40 ligand and CD70 on activated B cells. *J Immunol.* 1999; 162(12):7058-7066.(Biology)

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

Oshima H, Nakano H, Nohara C. Characterization of murine CD70 by molecular cloning and mAb. *Int Immunol.* 1998; 10(4):517-526.(Immunogen)

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

Tesselaar K, Gravestien 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)