

Technical Data Sheet

PE Rat Anti-Mouse CD70

Product Information

Material Number:	555286
Size:	0.1 mg
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 $\leq 0.09\%$ 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 R-PE under optimum conditions, and unconjugated antibody and free PE were 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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Suggested Companion Products

Catalog Number	Name	Size	Clone
553057	Purified NA/LE Hamster Anti-Mouse CD3e	0.5 mg	145-2C11
553787	Purified NA/LE Rat Anti-Mouse CD40	0.5 mg	3/23
553721	Purified NA/LE Hamster Anti-Mouse CD40	0.5 mg	HM40-3
553989	PE Rat IgG2b, κ Isotype Control	0.1 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

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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)

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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)