

Technical Data Sheet

Purified NA/LE Rat Anti-Mouse CD70

Product Information

Material Number:	562226
Alternate Name:	CD27 ligand; CD27L, CD27LG; Tnfsf7; Ki-24 Antigen
Size:	0.5 mg
Concentration:	1.0 mg/ml
Clone:	FR70
Immunogen:	BALB/c mouse B lymphoma A20.2J
Isotype:	Rat (F344) IgG2b, κ
Reactivity:	QC Testing: Mouse
Storage Buffer:	No azide/low endotoxin: Aqueous buffered solution containing no preservative, 0.2 μ m sterile filtered. Endotoxin level is ≤ 0.01 EU/ μ g (≤ 0.001 ng/ μ g) of protein as determined by the LAL assay.

Description

The FR70 monoclonal antibody specifically binds to mouse CD70, a 30-33 kDa type-II transmembrane glycoprotein. CD70 belongs to the TNF superfamily and is also known as tumor necrosis factor ligand superfamily member 7 (Tnfsf7). CD70 is the ligand for CD27 and is expressed primarily on activated B cells and dendritic cells and at low levels by some activated T cells. The CD27-CD70 interaction delivers costimulatory signals to T-cells and NK cells that can augment their proliferative, cytokine production, and cytotoxicity responses. It has been reported that FR70 mAb blocks the binding of CD70 to CD27 and inhibits some humoral and cell-mediated immune responses that depend on costimulated T cells, NK cells or both.

Preparation and Storage

Store undiluted at 4°C.

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

This preparation contains no preservatives, thus it should be handled under aseptic conditions.

Application Notes

Application

Flow cytometry	Routinely Tested
Blocking	Reported
Immunofluorescence	Reported
Inhibition	Reported

Suggested Companion Products

Catalog Number	Name	Size	Clone
555286	PE Rat Anti-Mouse CD70	0.1 mg	FR70
555285	Biotin Rat Anti-Mouse CD70	0.5 mg	FR70
553898	Biotin Mouse Anti-Rat IgG2b	0.5 mg	RG7/11.1
554061	PE Streptavidin	0.5 mg	(none)
556968	Purified NA/LE Rat IgG2b, κ Isotype Control	0.5 mg	A95-1

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/pharmingen/protocols for technical protocols.

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: Blocking)

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. (Clone-specific: Inhibition)

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: Blocking, Immunoprecipitation, Inhibition)

Shklovskaya E, Roediger B, Fazekas de St Groth B. Epidermal and dermal dendritic cells display differential activation and migratory behavior while sharing the ability to stimulate CD4+ T cell proliferation in vivo. *J Immunol.* 2008; 181(1):418-430. (Clone-specific: Flow cytometry)

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

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Taraban VY, Martin S, Attfield KE, Glennie MJ, Elliott T, Elewaut D, Van Calenbergh S, Linclau B, Al-Shamkhani A. Invariant NKT cells promote CD8+ cytotoxic T cell responses by inducing CD70 expression on dendritic cells. *J Immunol.* 2008; 180(7):4615-4620. (Clone-specific: Immunofluorescence)
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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