

Technical Data Sheet

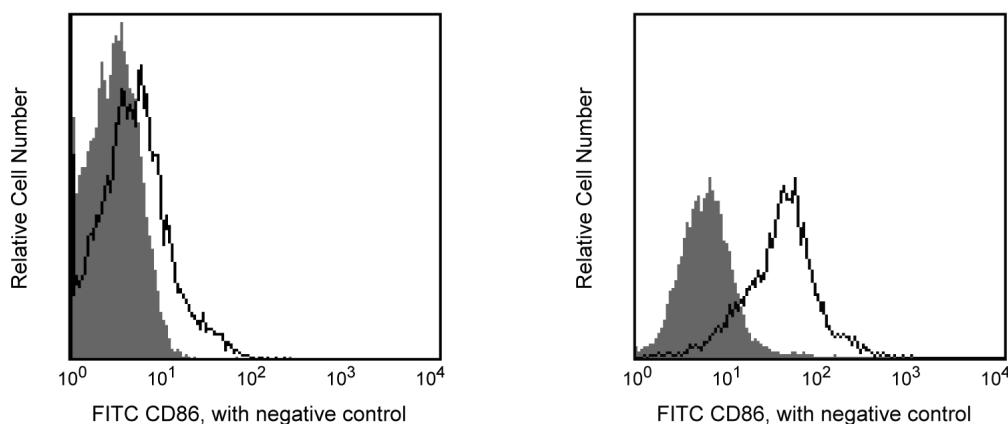
FITC Rat Anti-Mouse CD86

Product Information

Material Number:	561962
Alternate Name:	B7-2
Size:	0.1 mg
Concentration:	0.5 mg/ml
Clone:	GL1
Immunogen:	Mouse (CBA/Ca) LPS-activated splenic B Cells
Isotype:	Rat (LOU) IgG2a, κ
Reactivity:	QC Testing: Mouse
Storage Buffer:	Aqueous buffered solution containing $\leq 0.09\%$ sodium azide.

Description

The GL1 antibody has been reported to react with the B7-2 (CD86) costimulatory molecule expressed on a broad spectrum of leukocytes, including B lymphocytes, T lymphocytes, thioglycollate-induced peritoneal macrophages, dendritic cells and astrocytes. CD86 is expressed at low levels by freshly explanted peripheral B and T cells, and its expression is substantially increased by a variety of T cell- and B cell-specific stimuli with a peak expression after 18-42 hours of culture. In contrast to most naive CD4⁺ T cells, memory CD4⁺ T cells express B7-2, both at the mRNA and protein level. CD86, a ligand for CD28 and CD152 (CTLA-4), is one of the accessory molecules that plays an important role in T cell-B cell costimulatory interactions. It has been shown to be involved in immunoglobulin class-switching and triggering of mouse NK cell-mediated cytotoxicity. CD80 (B7-1) is an alternate ligand for CD28 and CD152 (CTLA-4). GL1 antibody reportedly blocks MLR and stimulation of T cells by natural antigen-presenting cells. In addition, a mixture of anti-B7-1 and anti B7-2 (GL1) mAbs reportedly inhibits the in vitro interaction of CTLA-4 with its ligand and the in vivo priming of cytotoxic T lymphocytes.



Upregulation of membrane CD86 (B7-2) on activated B lymphocytes. Freshly isolated (left panel) or 72-hour LPS-stimulated BALBc splenocytes (right panel) were pretreated with Mouse BD Fc Block™ purified anti-mouse CD16/CD32 mAb 2.4G2 (Cat. No. 553141/553142) and either stained with FITC-conjugated GL1 mAb (open histograms) or unstained (shaded histograms). Flow cytometry was performed on a BD FACScan™ Flow Cytometry System. Resting lymphocytes (left panel) or activated blasts (right panel) were selected according to light-scatter profile.

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 FITC under optimum conditions, and unreacted FITC was removed.

Application Notes

Application

Flow cytometry

Routinely Tested

Recommended Assay Procedure:

Mouse BD Fc Block™ purified anti-mouse CD16/32 mAb 2.4G2 (Cat. No. 553141/553142) may help to reduce non-specific binding of GL1 antibody to cells bearing Fc γ -receptors.

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Suggested Companion Products

<u>Catalog Number</u>	<u>Name</u>	<u>Size</u>	<u>Clone</u>
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
553929	FITC Rat IgG2a, κ Isotype Control	0.25 mg	R35-95
554656	Stain Buffer (FBS)	500 ml	(none)

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.
4. For fluorochrome spectra and suitable instrument settings, please refer to our Fluorochrome Web Page at www.bdbiosciences.com/colors.
5. An isotype control should be used at the same concentration as the antibody of interest.

References

- Bluestone JA. New perspectives of CD28-B7-mediated T cell costimulation. *Immunity*. 1995; 2(6):555-559. (Biology)
- Borriello F, Sethna MP, Boyd SD, et al. B7-1 and B7-2 have overlapping, critical roles in immunoglobulin class switching and germinal center formation. *Immunity*. 1997; 6(3):303-313. (Biology)
- Freeman GJ, Borriello F, Hodes RJ, et al. Uncovering of functional alternative CTLA-4 counter-receptor in B7-deficient mice. *Science*. 1993; 262(5135):907-909. (Biology)
- Hakamada-Taguchi R, Kato T, Ushijima H, Murakami M, Uede T, Nariuchi H. Expression and co-stimulatory function of B7-2 on murine CD4+ T cells. *Eur J Immunol*. 1998; 28(3):865-873. (Biology)
- Hathcock KS, Laszlo G, Dickler HB, Bradshaw J, Linsley P, Hodes RJ. Identification of an alternative CTLA-4 ligand costimulatory for T cell activation. *Science*. 1993; 262(5135):905-907. (Immunogen: Blocking, Immunoprecipitation)
- Hathcock KS, Laszlo G, Pucillo C, Linsley P, Hodes RJ. Comparative analysis of B7-1 and B7-2 costimulatory ligands: expression and function. *J Exp Med*. 1994; 180(2):631-640. (Clone-specific: Blocking)
- Inaba K, Witmer-Pack M, Inaba M, et al. The tissue distribution of the B7-2 costimulator in mice: abundant expression on dendritic cells in situ and during maturation in vitro. *J Exp Med*. 1994; 180(5):1849-1860. (Clone-specific: Blocking, Immunohistochemistry)
- Krummel MF, Allison JP. CD28 and CTLA-4 have opposing effects on the response of T cells to stimulation. *J Exp Med*. 1995; 182(2):459-465. (Clone-specific: Blocking)
- Larsen CP, Ritchie SC, Hendrix R, et al. Regulation of immunostimulatory function and costimulatory molecule (B7-1 and B7-2) expression on murine dendritic cells. *J Immunol*. 1994; 152(11):5208-5219. (Biology)
- Lenschow DJ, Su GH, Zuckerman LA, et al. Expression and functional significance of an additional ligand for CTLA-4. *Proc Natl Acad Sci U S A*. 1993; 90(23):11054-11058. (Biology)
- Liu Y, Wenger RH, Zhao M, Nielsen PJ. Distinct costimulatory molecules are required for the induction of effector and memory cytotoxic T lymphocytes. *J Exp Med*. 1997; 185(2):251-262. (Clone-specific: Blocking)
- Martin-Fontecha A, Assarsson E, Carbone E, Karre K, Ljunggren HG. Triggering of murine NK cells by CD40 and CD86 (B7-2). *J Immunol*. 1999; 162(10):5910-5916. (Biology)
- McAdam AJ, Schweitzer AN, Sharpe AH. The role of B7 co-stimulation in activation and differentiation of CD4+ and CD8+ T cells. *Immunol Rev*. 1998; 165:231-247. (Biology)
- Nikcevic KM, Gordon KB, Tan L, et al. IFN-gamma-activated primary murine astrocytes express B7 costimulatory molecules and prime naive antigen-specific T cells. *J Immunol*. 1997; 158(2):614-621. (Biology)
- Rauschmayr-Kopp T, Williams IR, Borriello F, Sharpe AH, Kupper TS. Distinct roles for B7 costimulation in contact hypersensitivity and humoral immune responses to epicutaneous antigen. *Eur J Immunol*. 1998; 28(12):4221-4227. (Biology)
- Roy M, Aruffo A, Ledbetter J, Linsley P, Kehry M, Noelle R. Studies on the interdependence of gp39 and B7 expression and function during antigen-specific immune responses. *Eur J Immunol*. 1995; 25(2):596-603. (Biology)
- Turley SJ, Inaba K, Garrett WS, et al. Transport of peptide-MHC class II complexes in developing dendritic cells. *Science*. 2000; 288(5465):522-527. (Clone-specific: Electron microscopy, Immunofluorescence)