Technical Data Sheet

Purified NA/LE Hamster Anti-Mouse CD80

Product Information

Material Number:	**553765**
Alternate Name:	B7-1
Size:	0.5 mg
Concentration:	1.0 mg/ml
Clone:	16-10A1
Immunogen:	Mouse CD80 (B7) Transfected Cell Line
Isotype:	Armenian Hamster IgG2, κ
Reactivity:	QC Testing: Mouse Reported: Dog
Storage Buffer:	No azide/low endotoxin: Aqueous buffered solution containing no preservative, 0.2μm sterile filtered. Endotoxin level is ≤0.01 EU/μg (≤0.001 ng/μg) of protein as determined by the LAL assay.

Description

The 16-10A1 antibody reacts with CD80 (B7-1). This member of the Ig superfamily, along with CD86 (B7-2), participates in T-cell co-stimulation via interactions with CD28 and CD152 (CTLA-4). CD80 has been reported to be constitutively expressed on dendritic cells, monocytes, and peritoneal macrophages; and it is inducible on B cells by various means, including activation by LPS, IL-4, and the cross-linking of surface Ig. Expression of CD80 has been reported to be greatly enhanced on splenic B cells following activation by LPS, with peak expression occurring between 48 and 72 hours. It has been reported that the activation of purified B cells with LPS can induce CD80 expression in as few as 18 hours. The 16-10A1 antibody has been reported to block binding of CTLA-4 Ig to CD80 and to block T-cell activation by Con A-elicited peritoneal exudate cells and CD80-transfected cell lines. However, 16-10A1 antibody alone is not able to block T-cell activation by antigen-presenting cells. CD86 (B7-2) is an alternate ligand for CD28 and CD152 (CTLA-4). Preliminary reports indicate that the 16-10A1 mAb may block the binding of rat anti-CD80 mAb clone 1G10 (Cat. No. 553368). In addition, it has been reported that the 16-10A1 antibody may cross-react with an activation antigen expressed on IFN-γ-activated alveolar macrophages of the dog.

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
Immunoprecipitation	Reported
Immunohistochemistry-frozen	Reported

Recommended Assay Procedure:

Flow Cytometry: For flow cytometry of leukocytes, it is recommended that Mouse BD Fc Block™ (Cat. No. 553141) be used. When using Mouse BD Fc Block™ (clone 2.4G2), it is important that the second-step anti-hamster IgG antibody does not cross-react with the 2.4G2 mAb (rat IgG2b, κ); we have found that the anti-hamster IgG cocktail (Cat. No. 554010) to be effective. Since this antigen is expressed at low density, it may be desirable to amplify staining by using a biotinylated second-step reagent followed by a "bright" third-step reagent, such as PE streptavidin (Cat. No. 554061).

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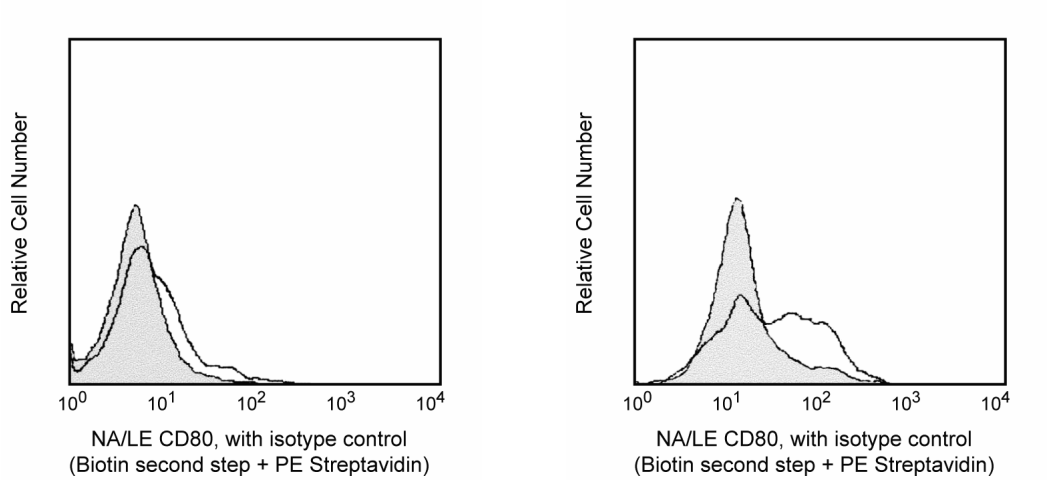

Expression of membrane CD80 by mouse splenocytes. *Freshly isolated (left panel) or 72-hour LPS-stimulated BALB/c splenocytes (right panel) were pretreated with Mouse BD Fc Block™ (anti-mouse CD16/CD32 mAb 2.4G2, Cat. No. 553141) and stained with either purified 16-10A1 mAb (open histograms) or purified hamster IgG isotype control mAb (shaded histograms). Staining was detected with biotinylated mouse anti-hamster IgG (Cat. No. 554010) followed by PE streptavidin (Cat. No. 554061). Flow cytometry was performed on a FACScan™ (BD Biosciences, San Jose, CA).*

Suggested Companion Products

Catalog Number	Name	Size	Clone
559339	Purified NA/LE Hamster IgG2, κ Isotype Control	0.5 mg	B81-3
554010	Biotin Mouse Anti-Armenian and Syrian Hamster IgG Cocktail	0.5 mg	(none)
554061	PE Streptavidin	0.5 mg	(none)
553141	Purified Rat Anti-Mouse CD16/CD32 (Mouse BD Fc Block™)	0.1 mg	2.4G2

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Although hamster immunoglobulin isotypes have not been well defined, BD Biosciences Pharmingen has grouped Armenian and Syrian hamster IgG monoclonal antibodies according to their reactivity with a panel of mouse anti-hamster IgG mAbs. A table of the hamster IgG groups, Reactivity of Mouse Anti-Hamster Ig mAbs, may be viewed at http://www.bdbiosciences.com/documents/hamster_chart_11x17.pdf.
3. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.

References

Bluestone JA. New perspectives of CD28-B7-mediated T cell costimulation. *Immunity.* 1995; 2(6):555-559. (Biology)

Boussiotis VA, Gribben JG, Freeman GJ, Nadler LM. Blockade of the CD28 co-stimulatory pathway: a means to induce tolerance. *Curr Opin Immunol.* 1994; 6(5):797-807. (Biology)

Harlan DM, Hengartner H, Huang ML, et al. Mice expressing both B7-1 and viral glycoprotein on pancreatic beta cells along with glycoprotein-specific transgenic T cells develop diabetes due to a breakdown of T-lymphocyte unresponsiveness. *Proc Natl Acad Sci U S A.* 1994; 91(8):3137-3141. (Biology: Immunohistochemistry)

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. (Biology)

Herold KC, Vezys V, Koons A, Lenschow D, Thompson C, Bluestone JA. CD28/B7 costimulation regulates autoimmune diabetes induced with multiple low doses of streptozotocin. *J Immunol.* 1997; 158(2):984-991. (Biology: Immunohistochemistry, In vivo exacerbation)

Razi-Wolf Z, Freeman GJ, Galvin F, Benacerraf B, Nadler L, Reiser H. Expression and function of the murine B7 antigen, the major costimulatory molecule expressed by peritoneal exudate cells. *Proc Natl Acad Sci U S A.* 1992; 89(9):4210-4214. (Immunogen: Blocking, Immunoprecipitation)

Sojka DK, Donepudi M, Bluestone JA, Mokyr MB. Melphalan and other anticancer modalities up-regulate B7-1 gene expression in tumor cells. *J Immunol.* 2000; 164(12):6230-6236. (Biology)