

Technical Data Sheet

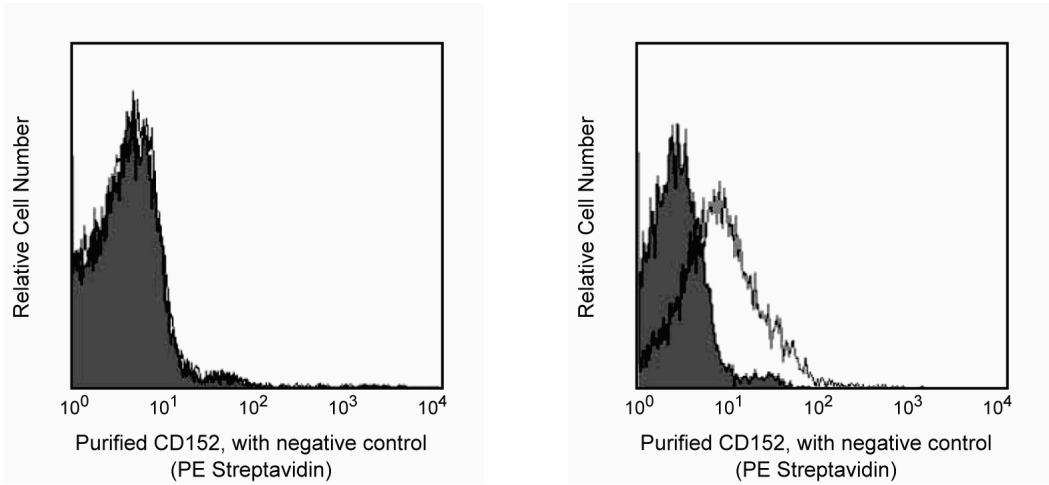
Purified Hamster Anti-Mouse CD152

Product Information

Material Number:	553719
Alternate Name:	CTLA-4
Size:	0.5 mg
Concentration:	0.5 mg/ml
Clone:	UC10-4F10-11
Immunogen:	Mouse CTLA-4 IgG2a Fusion
Isotype:	Armenian Hamster IgG1, κ
Reactivity:	QC Testing: Mouse
Storage Buffer:	Aqueous buffered solution containing ≤0.09% sodium azide.

Description

The UC10-4F10-11 antibody reacts with CD152 (CTLA-4), which is expressed on activated T lymphocytes 2-3 days after stimulation through T cell receptor. CTLA-4 has significant similarity to CD28 in amino acid sequence, structure, and genomic organization. Furthermore, CD152 and CD28 share common B7 family counter-receptors. Unlike CD28, CD152 expression appears to be restricted to activated T cells and CD25+CD4+ regulatory T (Treg) cells. Whereas CD28 delivers a costimulatory signal required for T-cell activation, CTLA-4 is a negative regulator of cell-mediated immune responses. CD152 may play roles in induction and/or maintenance of immunological tolerance, regulation of protective immunity, and autoimmune responses, and regulation of some aspects of thymocyte maturation. This hamster mAb to a mouse leukocyte antigen does not cross-react with rat leukocytes.



Expression of CD152 on activated T lymphocytes. C57BL/6 splenocytes were stained with either purified mAb UC10-4F10-11 (open histogram) or unstained (filled histogram), in the presence of Mouse Fc Block™ (purified anti-mouse CD16/CD32 mAb 2.4G2, Cat. No. 553141/553142), followed by biotinylated anti-hamster IgG cocktail (Cat. No. 554010) then Streptavidin-PE (Cat. No. 554061). The total viable leukocytes are displayed in the left panel. 48-hour ConA-activated C57BL/6 splenocytes were stained with FITC-conjugated anti-mouse CD4 mAb RM4-5 (Cat. No. 553046/553047), FITC-conjugated anti-mouse CD8a mAb 53-6.7 (Cat. No. 553030/553031), and purified mAb UC10-4F10-11 (open histogram), or no purified antibody (filled histogram), in the presence of Mouse Fc Block™, followed by biotinylated anti-hamster IgG cocktail then Streptavidin-PE. The total viable T lymphocytes (CD4+ and/or CD8a+) are displayed on the right panel. Flow cytometry was performed on a BD FACScan™ System (BD Biosciences, San Jose, CA).

Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography. Store undiluted at 4°C.

Application Notes

Application

Flow cytometry	Routinely Tested
Immunoprecipitation	Tested During Development

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Recommended Assay Procedure:

Since CD152 is expressed at low density on activated T cells, it may be necessary to amplify the signal by using a biotinylated second-step reagent, followed by a "bright" third-step reagent. We have found that biotin-conjugated mouse anti-hamster IgG (Cat. No. 554010) plus Streptavidin-PE (Cat. No. 554061) are effective. Mouse BD Fc Block™ (anti-mouse CD16/CD32 mAb 2.4G2, Cat. No. 553141/553142) may help to reduce non-specific binding of the antibody to cells bearing Fcγ receptors. Since a large proportion of the CTLA-4 molecule is intracellular, detection of the antigen is enhanced by staining cells permeabilized with the BD Cytotfix/Cytoperm™ intracellular staining kit (Cat. No. 554714).

Suggested Companion Products

Catalog Number	Name	Size	Clone
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
554714	BD Cytotfix/Cytoperm™ Fixation/Permeabilization Kit	250 tests	(none)
553046	FITC Rat Anti-Mouse CD4	0.1 mg	RM4-5
553030	FITC Rat Anti-Mouse CD8a	0.1 mg	53-6.7
553969	Purified Hamster IgG1, κ Isotype Control	0.5 mg	A19-3

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. 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.
5. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.
6. An isotype control should be used at the same concentration as the antibody of interest.

References

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