

Technical Data Sheet

FITC Rat Anti-Mouse CD137

Product Information

Material Number:	558975
Alternate Name:	4-1BB, Ly-63
Size:	0.1 mg
Concentration:	0.5 mg/ml
Clone:	1AH2
Immunogen:	Recombinant mouse 4-1BB
Isotype:	Rat (SD) IgG1, κ
Reactivity:	QC Testing: Mouse
Storage Buffer:	Aqueous buffered solution containing $\leq 0.09\%$ sodium azide.

Description

The 1AH2 clone (subclone of 53A2) has been reported to react with CD137, a member of the TNFR/NGFR superfamily. The expression of CD137 has been reported to be detectable from day 3 and peaks around day 6 after activation with ConA, PMA plus ionomycin, or immobilized anti-CD3e (Cat. No. 553058). Monomers, dimers, or tetramers of the 4-1BB antigen are expressed, upon activation, on the surface of splenic T lymphocytes, thymocytes, intestinal intraepithelial T lymphocytes (IEL), and some T cell lines and clones. While stimulating T cells by IL-2, IL-4, or anti-CD28 alone does not result in the expression of CD137; addition of IL-2, IL-4, anti-CD28, or syngeneic accessory cells to splenic T cells stimulated via TCR/CD3 can result in a high level of CD137 expression. CD137 has also been reported to be observed on IL-2 activated NK cells, but not on freshly isolated NK cells. It has been demonstrated that 4-1BB physically associates with p56 [lck] through a Cys-Arg-Cys-Pro binding site in its cytoplasmic domain; the same motif in the cytoplasmic tail of the CD4 and CD8a molecules is responsible for association with p56 [lck]. A signaling function for the CD137 molecule in mouse T cells is indicated by reports in which cross-linking of CD137 with 1AH2 mAb resulted in enhanced proliferation of CD3e-activated splenic T cells and IEL and in enhanced cytolytic activity of IEL in response to immobilized anti-CD3e. In addition to extracellular matrix proteins which bind to CD137, a 97-kDa dimer of the TNF/NGF superfamily has been reported to be a ligand for 4-1BB (4-1BBL). This molecule has been detected on Con A-activated T cells, LPS-activated macrophages, and anti- μ -activated splenic B cells. Interaction between T and B cells through 4-1BB/4-1BBL is reported to play a role in antigen presentation, further supporting a costimulatory role for CD137 in the immune response of T lymphocytes.

This antibody is routinely tested by flow cytometric analysis. Other applications were tested at BD Biosciences Pharmingen during antibody development only or reported in the literature.

Preparation and Storage

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. 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
553924	FITC Rat IgG1, κ Isotype Control	0.25 mg	R3-34

Product Notices

- Since applications vary, each investigator should titrate the reagent to obtain optimal results.
- Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.

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3. For fluorochrome spectra and suitable instrument settings, please refer to our Fluorochrome Web Page at www.bdbiosciences.com/pharming/en/colors.
4. 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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