

Technical Data Sheet

Biotin Anti-Human CD137

Product Information

Material Number:	552533
Alternate Name:	4-1BB
Size:	0.5 mg
Concentration:	0.5 mg/ml
Clone:	4B4-1
Isotype:	Mouse IgG1 κ
Reactivity:	QC Testing: Human
Workshop:	VI C-7
Storage Buffer:	Aqueous buffered solution containing ≤0.09% sodium azide.

Description

Reacts with 4-1BB, a 30 kDa glycoprotein expressed on activated T cells. 4-1BB can be detected on Con A or PHA-stimulated peripheral blood T cells (CD4+ and CD8+) and on CEM cells (human T-cell leukemia) following 2 day PMA and ionomycin stimulation, but not on resting T cells. 4-1BB is reported to be a participant in T-cell activation, being responsible for rescuing T cells from activation-induced apoptosis, upregulation of Th1-type, T-helper cells, downregulation of Th2-type cytokine production, and induction of cell adhesion to fibronectin.

Preparation and Storage

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

The antibody was conjugated with biotin under optimum conditions, and unreacted biotin was removed.

Store undiluted at 4° C and protected from prolonged exposure to light. Do not freeze.

Application Notes

Application

ELISA Detection	Tested During Development
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Recommended Assay Procedure:

ELISA Detection: Biotinylated 4B4-1 anti-human 4-1BB antibody is useful as a detection antibody for a sandwich ELISA which measures 4-1BB protein levels. Biotinylated 4B4-1 anti-human 4-1BB antibody can be paired with the purified h4-1BB-M127 anti-human 4-1BB as the capture antibody, with recombinant human 4-1BB:Fc fusion protein as the standard. This detection should be titrated between 0.5-1 µg/ml to determine its optimal concentration for ELISA detection. To obtain linear standard curves, doubling dilutions of recombinant human 4-1BB ranging from 2000 to 15 pg/ml are recommended for inclusion in each ELISA plate.

Note: This ELISA antibody pair shows no cross-reactivity with the following recombinant human cytokines: IL-1RI, IL-1RII, IL-1α, IL-1β, IL-2, IL-2sR-α, IL-3, IL-4, IL-4sR, IL-5, IL-6, IL-6R gp130, IL-7, IL-8, IL-10, IL-12 p40, IL-12 p70, IL-13, IL-15, TNF-α, TNF-β, sTNFRII, GM-CSF, TGFβ, IFN γ, CD40L, TRAIL, FasL.

Suggested Companion Products

Catalog Number	Name	Size	Clone
552532	Purified anti-human 4-1BB (Capture antibody)		

Product Notices

1. This reagent has been pre-diluted for use at the recommended Volume per Test. We typically use 1 X 10⁶ cells in a 100-µl experimental sample (a test).
2. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
3. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
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.

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References

- Kim YJ, Broxmeyer HE. Therapeutic potential of 4-1BB (CD137) as a regulator for effector CD8(+) T cells. *J Hematother Stem Cell Res.* 2001; 10(4):441-449. (Biology)
- Melero I, Shuford WW, Newby SA, et al. Monoclonal antibodies against the 4-1BB T-cell activation molecule eradicate established tumors. *Nat Med.* 1997; 3(6):682-685.(Biology)
- Michel J, Schwarz H. Expression of soluble CD137 correlates with activation-induced cell death of lymphocytes. *Cytokine.* 2000; 12(6):742-746.(Biology)
- Vinay DS, Kwon BS. Role of 4-1BB in immune responses. *Semin Immunol.* 1998; 10(6):481-489.(Biology)