Technical Data Sheet

Biotin Mouse Anti-Mouse CD212

Product Information

Material Number:	**551973**
Alternate Name:	IL-12 Receptor β1 chain
Size:	0.1 mg
Concentration:	0.5 mg/ml
Clone:	114
Immunogen:	IL-12Rβ1 Transfected Cell Line
Isotype:	Mouse IgG2a, κ
Reactivity:	QC Testing: Mouse
Storage Buffer:	Aqueous buffered solution containing ≤0.09% sodium azide.

Description

The 114 antibody reacts with mouse CD212 (the β1 subunit of IL-12Rβ1), originally termed IL-12Rβ, of the mouse IL-12 receptor complex. The IL-12Rβ1 subunit associates with a β2 subunit to form a heterodimeric IL-12 receptor complex. Each one of the IL-12R subunits exhibits low affinity for IL-12, but in combination, they bind IL-12 with high affinity. The IL-12Rβ1 subunit interacts primarily with IL-12 p40 whereas the IL-12Rβ2 binds both to IL-12 p40 and IL-12 p35. IL-12Rβ1 is required for high affinity binding of IL-12 but IL-12Rβ2 is required for signaling. IL-12Rβ1 has more recently been described to bind IL-23, a heterodimer formed of the p40 subunit from IL-12, and p19. The cytoplasmic regions of the β1 and β2 subunits contain the box1 and box2 motifs found in other cytokine receptors such as gp130, LIFR and G-CSFR. IL-12Rβ1 are primarily expressed by activated T cells and NK cells. Experiments with IL-12Rβ1 deficient mice have shown that IL-12Rβ1 is necessary for mouse T and NK cell responsiveness to IL-12 p75. The 114 antibody was generated by immunizing IL-12Rβ1 deficient mice of (129 x BALB/c)F1 background with mouse Ba/F3 cells that were stably transfected with IL-12Rβ1.

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.

Application Notes

Application

Flow cytometry	Routinely Tested

Recommended Assay Procedure:

The biotinylated 114 antibody (Cat. No. 551973) can be used for the immunofluorescent staining (≤ 1 µg antibody/10e6 cells) and flow cytometric analysis of mouse T cells and NK cells to measure their expressed levels of surface IL-12Rβ1. An appropriate purified immunoglobulin isotype control is clone G155-179 (Cat. No. 553455).

Suggested Companion Products

Catalog Number	Name	Size	Clone
553455	Biotin Mouse IgG2a, κ Isotype Control	0.25 mg	G155-178
554061	PE Streptavidin	0.5 mg	(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.

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