Technical Data Sheet

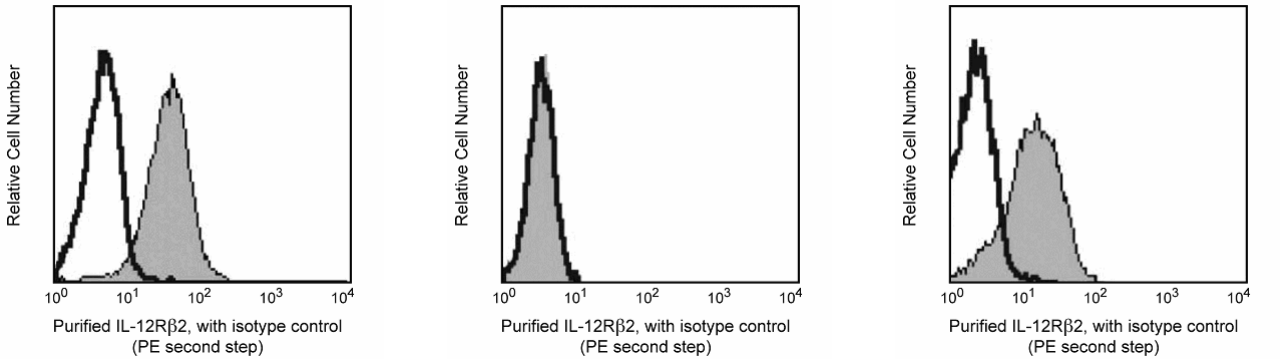
Purified Hamster Anti-Mouse IL-12 Receptor β2

Product Information

Material Number:	**552819**
Size:	0.1 mg
Concentration:	0.5 mg/ml
Clone:	HAM10B9
Immunogen:	Mouse IL-12Rβ2 transfectants
Isotype:	Armenian Hamster IgG1, κ
Reactivity:	QC Testing: Mouse
Storage Buffer:	Aqueous buffered solution containing ≤0.09% sodium azide.

Description

The HAM10B9 antibody reacts with the β2subunit (IL-12Rβ2), of the mouse IL-12 receptor complex. The IL-12Rβ2 subunit associates with a β1 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-12R β2 binds both to IL-12 p40 and IL-12 p35. IL-12Rβ1 is required for high affinity binding of IL-12 but IL-12R β2 is required for signaling. The cytoplasmic regions of the β1 and β2 subunits contain the box 1 and box 2 motifs found in other cytokine receptors such as gp130, LIFR and G-CSFR. Naive T cells do not express IL-12R but both IL-12R subunits can be induced on T cells by antigenic stimulation. The IL12R is also expressed on activated NK cells. Th1 cells express both IL-12R subunits while Th2 cells lose the β2 subunit during differentiation. The HAM10B9 antibody was generated by immunizing hamsters with mouse IL-12Rβ2 transfectants.



Expression of cell surface IL-12R 2 by T helper cells. *Mouse Th1 cell line, 2D6 (left panel) and Th2 cell line, D10 (center panel) were stained with purified anti-mouse IL-12 receptor ß2antibody (clone HAM10B9, 0.5 µg/test) followed by PE-conjugated anti-hamster IgG (0.25 µg, Cat . No. 554056). Staining with the HAM10B9 antibody (filled histograms) is compared to staining obtained using the isotype control antibody (open histograms). The histograms in the figure were derived from gated events with the forward and side light scatter characteristics of viable lymphocytes. Mouse splenocytes from C57BL/6 mice (right panel) were treated with an ammonium chloride lysing buffer to remove the red blood cells. Cells were subsequently cultured with ConA (2 µg/ml), PMA (50 ng/ml), Dextran sulfate (10 µg/ml), LPS (5 µg/ml), recombinant mouse IL-2 (10 ng/ml), recombinant mouse IL-12p70 (20 ng/ml) and anti-IL-4 antibody, clone 11B11 (5 µg/ml) for 5 days. Following culture the cells were harvested, washed, blocked with mouse Fc Block™ (Cat. No. 553141) and stained with purified anti-mouse IL-12 receptor β2 antibody (clone HAM10B9, 0.5 µg/test) followed by PE-conjugated anti-hamster IgG (0.25 µg, Cat . No. 554056) and Viaprobe (Cat. No. 555816). Staining with anti-mouse IL-12 receptor ß2antibody (clone HAM10B9, filled histograms) is compared to staining obtained using the isotype control antibody (Cat. No. 553969, open histograms). The histograms in the figure were derived from viable gated events (e.g. ViaProbe negative lymphocytes).*

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

BD Biosciences

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Recommended Assay Procedure:
The purified anti-mouse IL-12 receptor ß2antibody (clone HAM10B9, Cat. No. 552819) can be used for the immunofluorescent staining (≤1 µg antibody/10e6 cells) and flow cytometric analysis of mouse Th1 or NK cells to measure their expressed levels of surface IL-12Rβ2. An appropriate purified immunoglobulin isotype control is clone A19-3 (Cat. No. 553969).

Suggested Companion Products

Catalog Number	Name	Size	Clone
554056	PE Mouse Anti-Armenian and Syrian Hamster IgG Cocktail	0.2 mg	(none)
553141	Purified Rat Anti-Mouse CD16/CD32 (Mouse BD Fc Block™)	0.1 mg	2.4G2
555816	Cell Viability Solution	100 tests	(none)
553969	Purified Hamster IgG1, κ Isotype Control	0.5 mg	A19-3

Product Notices

1. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
2. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
3. 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/pharmingen/hamster_chart_11x17.pdf.
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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