Datasheet for ABIN2689735

anti-IL12RB2 antibody

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Overview

Quantity:	0.1 mg
Target:	IL12RB2
Reactivity:	Mouse
Host:	Armenian Hamster
Clonality:	Monoclonal
Application:	Flow Cytometry (FACS)

Product Details

Brand:	BD Pharmingen™
Immunogen:	Mouse IL-12Rbeta2 transfectants
Clone:	HAM10B9
Isotype:	IgG1 kappa
Characteristics:	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

Product Details

	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). BD Pharmingen™ Purified Hamster Anti-Mouse IL-12 Receptor β2 - Purified - Clone HAM10B9 - Isotype Armenian Hamster IgG1, κ - Reactivity Ms - 0.1 mg
Purification:	The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

Target Details

Target:	IL12RB2
Alternative Name:	IL-12 Receptor Beta2 (IL12RB2 Products)
Pathways:	JAK-STAT Signaling

Application Details

Application Notes:	Optimal working dilution should be determined by the investigator.
Restrictions:	For Research Use only

Handling

Concentration:	0.5 mg/mL
Buffer:	Aqueous buffered solution containing ≤0.09 % sodium azide.
Preservative:	Sodium azide
Precaution of Use:	This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Storage:	4 °C
Storage Comment:	Store undiluted at 4°C.

Publications

Product cited in:

Smeltz, Chen, Ehrhardt, Shevach: "Role of IFN-gamma in Th1 differentiation: IFN-gamma regulates IL-18R alpha expression by preventing the negative effects of IL-4 and by inducing/maintaining IL-12 receptor beta 2 expression." in: **Journal of immunology (Baltimore, Md. : 1950)**, Vol. 168, Issue 12, pp. 6165-72, (2002) (PubMed).

Chakir, Camilucci, Filion, Webb: "Differentiation of murine NK cells into distinct subsets based on variable expression of the IL-12R beta 2 subunit." in: **Journal of immunology (Baltimore, Md. : 1950)**, Vol. 165, Issue 9, pp. 4985-93, (2000) (PubMed).

Wu, Wang, Gadina, OShea, Presky, Magram: "IL-12 receptor beta 2 (IL-12R beta 2)-deficient mice are defective in IL-12-mediated signaling despite the presence of high affinity IL-12 binding sites." in: **Journal of immunology (Baltimore, Md. : 1950)**, Vol. 165, Issue 11, pp. 6221-8, (2000) (PubMed).

Lúdvíksson, Ehrhardt, Strober: "Role of IL-12 in intrathymic negative selection." in: **Journal of immunology (Baltimore, Md. : 1950)**, Vol. 163, Issue 8, pp. 4349-59, (1999) (PubMed).

Wang, Wilkinson, Podlaski, Wu, Stern, Presky, Magram: "Characterization of mouse interleukin-12 p40 homodimer binding to the interleukin-12 receptor subunits." in: **European journal of immunology**, Vol. 29, Issue 6, pp. 2007-13, (1999) (PubMed).

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