

DESCRIPTION

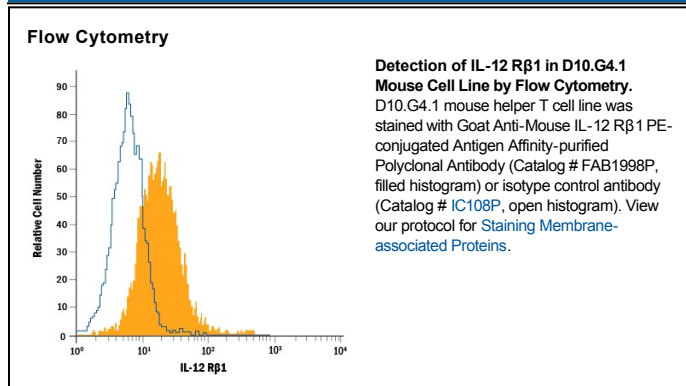
Species Reactivity	Mouse
Specificity	Detects mouse IL-12 R β 1 in direct ELISAs and Western blots. In these formats, approximately 20% cross-reactivity with recombinant human IL-12 R β 1 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	<i>S. frugiperda</i> insect ovarian cell line Sf 21-derived recombinant mouse IL-12 R β 1 Val32-Glu561 Accession # Q60837
Conjugate	Phycoerythrin Excitation Wavelength: 488 nm Emission Wavelength: 565-605 nm
Formulation	Supplied in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details. *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. [General Protocols](#) are available in the [Technical Information](#) section on our website.

	Recommended Concentration	Sample
Flow Cytometry	10 μ L/10 ⁶ cells	See Below

DATA



PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. <ul style="list-style-type: none"> 12 months from date of receipt, 2 to 8 °C as supplied.

BACKGROUND

IL-12 R β 1 is a 100 kDa type I transmembrane protein that belongs to the gp130/G-CSF R family of cytokine receptors. IL-12 R β 1 is a common subunit of both the IL-12 and IL-23 receptor complexes which play distinct but related roles in T cell mediated inflammatory reactions (1, 2). Mature mouse IL-12 R β 1 contains a 546 amino acid (aa) extracellular domain (ECD) with five fibronectin type III repeats, and a 147 aa cytoplasmic domain (3). Within the ECD, mouse IL-12 R β 1 shares 85% and 52% aa sequence identity with rat and human IL-12 R β 1, respectively. It shares 16%-21% aa sequence identity with the ECDs of mouse gp130, LIF R, G-CSF R, and IL-23 R. IL-12 and IL-23 are disulfide linked heterodimeric cytokines that share a common p40 subunit (1, 2). IL-12 R β 1 interacts with p40 at low affinity but does not transmit signals (3). Increased ligand binding affinity and signaling capacity are gained by association of IL-12 R β 1 with either IL-12 R β 2 or IL-23 R (4-6). IL-12 R β 2 and IL-23 R are the signal transducing components of these receptor complexes (4, 7). IL-12 R β 1 is expressed on activated T cells, NK cells, B cells, macrophages, and microglia (8-10). IL-12 induced signaling promotes the development of naïve T cells into IFN- β producing Th1 cells (11). IL-23 contributes to chronic inflammation by inducing the production of IL-17 by memory T cells (12). Naturally occurring homodimers of p40 can function as antagonists of IL-12 and IL-23 and can also induce macrophage chemotaxis in the absence of IL-12 R β 2 (13, 14).

References:

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