

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	Alexa Fluor 405 Excitation Wavelength: 405 nm Emission Wavelength: 421 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *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.

Western Blot Optimal dilution of this antibody should be experimentally determined.

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. 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).

PRODUCT SPECIFIC NOTICES

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