Mouse IL-12 Rβ1 Alexa Fluor® 750-conjugated Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF1998S
100 µg

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse IL-12 Rβ1 in direct ELISAs and Western blots. In these formats, approximately 20% cross-reactivity with recombinant human IL-12 Rβ1 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	*S. frugiperda* insect ovarian cell line *Sf* 21-derived recombinant mouse IL-12 Rβ1 Val32-Glu561 Accession # Q60837
Conjugate	Alexa Fluor 750 Excitation Wavelength: 749 nm Emission Wavelength: 775 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 Rβ1 is a 100 kDa type I transmembrane protein that belongs to the gp130/G-CSF R family of cytokine receptors. IL-12 Rβ1 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 Rβ1 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 Rβ1 shares 85% and 52% aa sequence identity with rat and human IL-12 Rβ1, 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 Rβ1 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 Rβ1 with either IL-12 Rβ2 or IL-23 R (4 - 6). IL-12 Rβ2 and IL-23 R are the signal transducing components of these receptor complexes (4, 7). IL-12 Rβ1 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 Rβ2 (13, 14).

PRODUCT SPECIFIC NOTICES

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Bio-Techne®
Global | bio-techne.com info@bio-techne.com techsupport@bio-techne.com TEL: 1.612.379.2956
USA | TEL: 800.343.7475 Canada | TEL: 855.668.8722 Europe | Middle East | Africa TEL: +44.0.1235.529449
China | info.cn@bio-techne.com TEL: 400.821.3475