

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human IL-11 R α in direct ELISAs.
Source	Monoclonal Mouse IgG _{2B} Clone # 1020854
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Chinese Hamster Ovary cell line, CHO-derived human IL-11 R α Ser24-Val363 Accession # Q14626
Conjugate	Alexa Fluor 594 Excitation Wavelength: 590 nm Emission Wavelength: 617 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

Interleukin-11 receptor alpha (IL-11 R α) is a 49 kDa type I transmembrane member of the gp130 subfamily of the hematopoietic cytokine receptor family (1-3). Mature human IL-11 R α consists of a 347 amino acid (aa) extracellular domain (ECD) that contains a C2 type Ig-like domain, two fibronectin type III domains, two potential glycosylation sites, and a WSxWS motif, followed by a 21 aa transmembrane region and a 31 aa cytoplasmic domain (4). Within the ECD, human IL-11 R α shares 84%, 82%, 90%, and 86% aa sequence identity with mouse, rat, equine, and bovine IL-11 R α , respectively. Alternative splicing generates an additional isoform that lacks the cytoplasmic domain (4). Upon low affinity binding to IL-11, IL-11 R α associates with gp130 to form a high affinity receptor complex (1, 3). gp130 also functions as a subunit in the receptors for Cardiotrophin-1, CNTF, IL-6, IL-27, IL-31, LIF, and Oncostatin M (5). IL-11 R α is widely expressed in adults, embryos, and embryonic stem cells (4, 6, 7). Deletion of IL-11 R α in female mice causes faulty decidualization, lack of decidual NK cells, and infertility (8-10). IL-11 is anti-apoptotic for oligodendrocytes, and lack of IL-11 R α increases the severity of experimental autoimmune encephalitis (11, 12). IL-11 R α is also anti-apoptotic for colonic epithelia, and increased IL-11 signaling may be a factor in inflammation-associated gastrointestinal cancer development (3, 13). IL-11 R α enhances osteoclast differentiation and bone remodeling but inhibits adipocyte differentiation (1, 2). Recombinant soluble IL-11 R α confers IL-11 responsiveness to cells expressing gp130, while in cells expressing transmembrane IL-11 R α and gp130, soluble IL-11 R α acts as an IL-11 antagonist (14-16).

PRODUCT SPECIFIC NOTICES

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