

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 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

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

This product is provided under an agreement between Life Technologies Corporation and R&D Systems, Inc., and the manufacture, use, sale or import of this product is subject to one or more US patents and corresponding non-US equivalents, owned by Life Technologies Corporation and its affiliates. The purchase of this product conveys to the buyer the non-transferable right to use the purchased amount of the product and components of the product only in research conducted by the buyer (whether the buyer is an academic or for-profit entity). The sale of this product is expressly conditioned on the buyer not using the product or its components (1) in manufacturing; (2) to provide a service, information, or data to an unaffiliated third party for payment; (3) for therapeutic, diagnostic or prophylactic purposes; (4) to resell, sell, or otherwise transfer this product or its components to any third party, or for any other commercial purpose. Life Technologies Corporation will not assert a claim against the buyer of the infringement of the above patents based on the manufacture, use or sale of a commercial product developed in research by the buyer in which this product or its components was employed, provided that neither this product nor any of its components was used in the manufacture of such product. For information on purchasing a license to this product for purposes other than research, contact Life Technologies Corporation, Cell Analysis Business Unit, Business Development, 29851 Willow Creek Road, Eugene, OR 97402, Tel: (541) 465-8300. Fax: (541) 335-0354.