

DESCRIPTION

Species Reactivity	Bovine
Specificity	Detects bovine IL-2 in ELISAs and Western blots. In sandwich immunoassays, less than 0.2% cross-reactivity with recombinant human IL-2, recombinant mouse IL-2, recombinant rat IL-2, recombinant feline IL-2, recombinant canine
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	<i>E. coli</i> -derived recombinant bovine IL-2 Ala21-Thr155 Accession # P05016
Conjugate	Alexa Fluor 350 Excitation Wavelength: 346 nm Emission Wavelength: 442 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.

ELISA Capture (Matched Antibody Pair)	Optimal dilution of this antibody should be experimentally determined.
ELISA Detection (Matched Antibody Pair)	Optimal dilution of this antibody should be experimentally determined.
Western Blot	Optimal dilution of this antibody should be experimentally determined.
Immunocytochemistry	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

Bovine Interleukin-2 (IL-2) is a 15 kDa, α -helical, single chain, potentially glycosylated polypeptide that has potent stimulatory activity for antigen-activated T cells (1-5). The molecule is synthesized as a 155 amino acid (aa) precursor that contains a 20 aa signal peptide plus a 135 aa mature segment that is possibly O-glycosylated (4, 5). The mature region has multiple α -helices and one intrachain disulfide bond. Mature bovine IL-2 is 64%, 60%, 49%, 50%, 72%, 63% and 67% to mature human, canine, mouse, rat, porcine, equine, and feline IL-2, respectively. Mammalian cells known to express IL-2 include CD4⁺ and CD8⁺ T cells, visceral smooth muscle cells, eosinophils, $\gamma\delta$ T cells, B cells and dendritic cells. The receptor for IL-2 is complex and consists of three distinct subunits in varying combinations (6, 7). Two of these are ligand-binding and are termed IL-2 R α and IL-2 R β . IL-2 R α is 55 kDa and binds IL-2 with low affinity. IL-2 R β is 75 kDa and binds IL-2 with intermediate affinity. Signal transduction is performed by both IL-2 R β and a 64 kDa common gamma chain (γ_c). This signal transducing common gamma chain does not bind IL-2, but does heterodimerize with IL-2 R β to form a functional IL-2 receptor. The complex heterotrimeric α - β - γ_c receptor may arise from IL-2 binding to preformed R α -R β complexes (8). Functionally, IL-2 is best known for its autocrine and paracrine activity on T cells. It drives resting T cells into active G1, inducing IL-2 and IL-2 R α synthesis and cell proliferation (7). It also promotes Fas-induced death of naïve CD4⁺ T cells, while having minimal effect on activated CD4⁺ memory lymphocytes. Finally, IL-2 seems to play a central role in the expansion and maintenance of CD4⁺ CD25⁺ regulatory T cells. Thus, IL-2 may be a key cytokine in the natural suppression of autoimmunity (9, 10).

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.