

## DESCRIPTION

|                           |                                                                                                                                                                                                                                                                             |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Species Reactivity</b> | Cotton Rat                                                                                                                                                                                                                                                                  |
| <b>Specificity</b>        | Detect cotton rat IL-2 in direct ELISAs and Western blots. In direct ELISAs, approximately 20% cross-reactivity with recombinant rat IL-2 and recombinant mouse IL-2 is observed and less than 5% cross-reactivity with recombinant human IL-2 and re                       |
| <b>Source</b>             | Polyclonal Goat IgG                                                                                                                                                                                                                                                         |
| <b>Purification</b>       | Antigen Affinity-purified                                                                                                                                                                                                                                                   |
| <b>Immunogen</b>          | <i>E. coli</i> -derived recombinant cotton rat IL-2                                                                                                                                                                                                                         |
| <b>Conjugate</b>          | Alexa Fluor 750<br>Excitation Wavelength: 749 nm<br>Emission Wavelength: 775 nm                                                                                                                                                                                             |
| <b>Formulation</b>        | Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide<br><br>*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.

|                       |                                                                        |
|-----------------------|------------------------------------------------------------------------|
| <b>Neutralization</b> | Optimal dilution of this antibody should be experimentally determined. |
| <b>Western Blot</b>   | Optimal dilution of this antibody should be experimentally determined. |

## PREPARATION AND STORAGE

|                                |                                                                                                                   |
|--------------------------------|-------------------------------------------------------------------------------------------------------------------|
| <b>Shipping</b>                | The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below. |
| <b>Stability &amp; Storage</b> | Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied                          |

## BACKGROUND

Interleukin-2 (IL-2) is a O-glycosylated four  $\alpha$ -helix bundle cytokine that has potent stimulatory activity for antigen-activated T cells. It is expressed by CD4<sup>+</sup> and CD8<sup>+</sup> T cells,  $\gamma\delta$  T cells, B cells, dendritic cells, and eosinophils (1-3). Mature cotton rat IL-2 shares 67%, 70% and 78% amino acid sequence identity with human, mouse and rat IL-2, respectively. The receptor for IL-2 consists of three subunits that are present on the cell surface in varying preformed complexes (4-6). The 55 kDa IL-2 R $\alpha$  is specific for IL-2 and binds with low affinity. The 75 kDa IL-2 R $\beta$ , which is also a component of the IL-15 receptor, binds IL-2 with intermediate affinity. The 64 kDa common gamma chain  $\gamma$ c/IL-2 R $\gamma$ , which is shared with the receptors for IL-4, -7, -9, -15, and -21, does not independently interact with IL-2. Upon ligand binding, signal transduction is performed by both IL-2 R $\beta$  and  $\gamma$ c. IL-2 is best known for its autocrine and paracrine activity on T cells. It drives resting T cells to proliferate and induces IL-2 and IL-2 R $\alpha$  synthesis (1, 2). It contributes to T cell homeostasis by promoting the Fas-induced death of naïve CD4<sup>+</sup> T cells but not activated CD4<sup>+</sup> memory lymphocytes (7). IL-2 plays a central role in the expansion and maintenance of regulatory T cells, although it inhibits the development of Th17 polarized cells (8-10). Thus, IL-2 may be a key cytokine in the natural suppression of autoimmunity (11, 12).

## 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.