

## Product Information

### Anti-Interleukin-7 Receptor $\alpha$ /CD127

produced in goat, affinity isolated antibody

Catalog Number **I7284**

#### Product Description

Anti-Interleukin-7 R $\alpha$ /CD127 is produced in goat using NSO-derived recombinant mouse interleukin-7 soluble receptor  $\alpha$  (rmIL-7 sR $\alpha$ ) (GeneID 16197). The antibody is purified using mouse IL-7 R $\alpha$  affinity chromatography.

Anti-Interleukin-7 Receptor  $\alpha$ /CD127 recognizes mouse interleukin-7. Applications include immunoblotting and Flow Cytometry.

Interleukin-7 (IL-7) is a lymphoid cell growth factor that affects pre-B, pro-B, and early T cells.<sup>1</sup> It was previously known as pre-B cell growth factor and lymphopoietin-1.<sup>2,3</sup> IL-7 is a glycoprotein which promotes the proliferation of precursor B cells, thymocytes, T cell progenitors, and mature CD4<sup>+</sup> and CD8<sup>+</sup> T cells. The biological effects of IL-7 are mediated by the binding of IL-7 to the specific cell surface receptor. The functional high-affinity IL-7 receptor consists of an  $\alpha$  chain and a  $\gamma$  chain.<sup>4</sup> Both IL-7 R $\alpha$  and IL-7 R $\gamma$  are members of the hematopoietin receptor superfamily.

The ligand-binding subunit of the IL-7 R complex has been cloned from human and mouse.<sup>5</sup> IL-7 R $\alpha$  cDNA encodes a precursor protein containing a signal peptide, an extracellular ligand binding domain, a transmembrane region, and a cytoplasmic region. Human and mouse IL-7 R $\alpha$  show 64% amino acid sequence identity. IL-7 R $\alpha$  transcripts have been observed in spleen, thymus, fetal liver, developing T cells, B cells, mature T cells, and bone marrow-derived macrophages.

#### Reagent

Supplied lyophilized from a 0.2  $\mu$ m filtered solution of phosphate buffered saline with 5% trehalose.

#### Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

#### Preparation Instructions

To one vial of lyophilized powder, add 1 mL of 0.2  $\mu$ m filtered PBS to produce a 0.1 mg/mL stock solution. If aseptic technique is used, no further filtration should be needed for use in cell culture environments.

#### Storage/Stability

Prior to reconstitution, store at  $-20^{\circ}\text{C}$ . The reconstituted product may be stored at  $2-8^{\circ}\text{C}$  for up to one month. For extended storage, freeze in working aliquots at  $-20^{\circ}\text{C}$ . Repeated freezing and thawing, or storage in "frost-free" freezers, is not recommended.

#### Product Profile

**Immunoblotting:** a working antibody concentration of 0.1 - 0.2  $\mu\text{g}/\text{mL}$  is recommended. The detection limit for recombinant mouse IL-7 R $\alpha$  is  $\sim 5$  ng/lane under non-reducing and reducing conditions. In this format, this antibody shows less than 1% cross-reactivity with rhIL-7 R $\alpha$ .

**Flow Cytometry:** a working antibody concentration of 3-10  $\mu\text{g}/\text{mL}/10^6$  cells is recommended.

**Note:** In order to obtain the best results using various techniques and preparations, we recommend determining the optimal working dilutions by titration.

Endotoxin: < 0.1 EU/μg antibody as determined by the LAL method.

**References**

1. Henney, C. S., *Immunology Today*, **10**, 170 (1989).
2. Namen, A. E., et al., *Nature*, **333**, 571 (1988).

3. Namen, A. E., et al., *J. Exp. Med.*, **167**, 988 (1988).
4. Hofmeister, R., et al., *Cytokine Growth Factor Rev.*, **10**, 41-60 (1999).
5. Goodwin, R.G., et al., *Cell*, **60**, 941-951 (1990).

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