

#### DESCRIPTION

<b>Species Reactivity</b>	Mouse
<b>Specificity</b>	Detects mouse IL-7 Rα/CD127 in ELISAs.
<b>Source</b>	Monoclonal Rat IgG <sub>2B</sub> Clone # 132206
<b>Purification</b>	Protein A or G purified from hybridoma culture supernatant
<b>Immunogen</b>	Mouse myeloma cell line NS0-derived recombinant mouse IL-7 Rα/CD127 Glu21-Asp239 Accession # P16872
<b>Conjugate</b>	Alexa Fluor 405 Excitation Wavelength: 405 nm Emission Wavelength: 421 nm
<b>Formulation</b>	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.

<b>ELISA Capture (Matched Antibody Pair)</b>	Optimal dilution of this antibody should be experimentally determined.
<b>ELISA Detection (Matched Antibody Pair)</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 7 Receptor alpha (IL-7 Rα), also known as CD127, is a 75 kDa hematopoietin receptor superfamily member that plays an important role in lymphocyte differentiation, proliferation, and survival (1, 2). Mature mouse IL-7 Rα consists of a 219 amino acid (aa) extracellular domain (ECD) with one fibronectin type III domain and a WSxWS motif, a 25 aa transmembrane segment, and a 195 aa cytoplasmic domain (3). Within the ECD, mouse IL-7 Rα shares 67% and 79% aa sequence identity with human and rat IL-7 Rα, respectively. IL-7 Rα associates with the common γ chain (γ<sub>C</sub>) to form the functional high affinity IL-7 receptor complex (4). The γ<sub>C</sub> is also a subunit of the receptors for IL-2, -4, -9, -15, and -21. Human and mouse IL-7 show cross-species activity through the IL-7 receptor (3, 5). IL-7 Rα is expressed on double negative (CD4<sup>-</sup>CD8<sup>-</sup>) and CD4<sup>+</sup> or CD8<sup>+</sup> single positive T cells as well as on CD8<sup>+</sup> memory T cells and their precursors (6, 7). It is expressed early in B cell development, prior to the appearance of surface IgM (6). In mouse, IL-7 activation of IL-7 Rα is critical for both T cell and B cell lineage development (8). In human it is required for T cell but not for B cell development (9). IL-7 induces the down regulation and shedding of cell surface IL-7 Rα (10). IL-7 Rα additionally associates with TSLP R to form the functional receptor for thymic stromal lymphopoietin (11, 12). TSLP indirectly regulates T cell development by modulating dendritic cell activation (2, 13). Knockout of TSLP R in mice provokes minor changes in B and T cell development compared to those seen with IL-7 Rα deletion (8, 14). The complexity of IL-7 Rα biology is suggested by the competition between IL-7 and TSLP for receptor binding and by the ability of IL-7 Rα to form functional complexes with SCF R and HGF R (11, 12, 15, 16).

#### PRODUCT SPECIFIC NOTICES

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