# antibodies .- online.com







### **IL7R ELISA Kit**





#### Overview

| Quantity:                | 96 tests        |
|--------------------------|-----------------|
| Target:                  | IL7R            |
| Binding Specificity:     | AA 21-239       |
| Reactivity:              | Mouse           |
| Method Type:             | Sandwich ELISA  |
| Detection Range:         | 312-20000 pg/mL |
| Minimum Detection Limit: | 312 pg/mL       |
| Application:             | ELISA           |

#### **Product Details**

| Purpose:                    | Sandwich High Sensitivity ELISA kit for Quantitative Detection of Mouse IL7R/CD127 |
|-----------------------------|--|
| Brand:                      | PicoKine™  |
| Sample Type:                | Cell Culture Supernatant, Serum  |
| Analytical Method:          | Quantitative   |
| Detection Method:           | Colorimetric   |
| Immunogen:                  | Expression system for standard: NSO Immunogen sequence: E21-D239                   |
| Specificity:                | Expression system for standard: NSO Immunogen sequence: E21-D239                   |
| Cross-Reactivity (Details): | There is no detectable cross-reactivity with other relevant proteins.              |

#### **Product Details**

| Sensitivity:           | <10pg/mL  |
|------------------------|---|
| Material not included: | Microplate reader in standard size. Automated plate washer. Adjustable pipettes and pipette     |
|                        | tips. Multichannel pipettes are recommended in the condition of large amount of samples in the  |
|                        | detection. Clean tubes and Eppendorf tubes. Washing buffer (neutral PBS or TBS). Preparation    |
|                        | of 0.01M TBS: Add 1.2g Tris, 8.5g Nacl  |
| Target Details         |   |
| Target:                | IL7R  |
| Alternative Name:      | IL7R (IL7R Products)  |
| Background:            | Protein Function: Receptor for interleukin-7. Also acts as a receptor for thymic stromal        |
|                        | lymphopoietin (TSLP).   |
|                        | Background: The interleukin-7 receptor(IL7R) is a protein found on the surface of cells. It is  |
|                        | mapped to 5p13.2. The protein encoded by this gene is a receptor for interleukine 7(IL7). The   |
|                        | function of this receptor requires the interleukin 2 receptor, gamma chain(IL2RG), which is a   |
|                        | common gamma chain shared by the receptors of various cytokines, including interleukine 2, 4,   |
|                        | 7, 9, and 15. IL7R has been shown to play a critical role in the development of immune cells    |
|                        | called lymphocytes-specifically in a process known as V(D)J recombination. This protein is also |
|                        | found to control the accessibility of a region of the genome that contains the T-cell receptor  |
|                        | gamma gene, by STAT5 and histone acetylation. What's more, IL7R antagonism is efficacious       |
|                        | in treatment of EAE through its effects on Th17 cells and is a potential treatment for MS.      |
|                        | Synonyms: Interleukin-7 receptor subunit alpha,IL-7 receptor subunit alpha,IL-7R subunit        |
|                        | alpha,IL-7R-alpha,IL-7RA,CD127,II7r,  |
|                        | Full Gene Name: Interleukin-7 receptor subunit alpha  |
|                        | Cellular Localisation: Membrane, Single-pass type I membrane protein.                           |
| Gene ID:               | 16197   |
| UniProt:               | P16872  |
| Pathways:              | JAK-STAT Signaling, Regulation of Leukocyte Mediated Immunity, Production of Molecular          |
|                        | Mediator of Immune Response, Regulation of Cell Size  |
| Application Details    |   |
| Application Notes:     | Before using Kit, spin tubes and bring down all components to bottom of tube. Duplicate well    |
|                        | assay was recommended for both standard and sample testing.                                     |

## **Application Details**

| Comment:         | Sequence similarities: Belongs to the type I cytokine receptor family. Type 4 subfamily.        |
|------------------|---|
|                  | Tissue Specificity: Spleen, thymus and fetal liver.   |
| Plate:           | Pre-coated  |
| Protocol:        | mouse IL7R ELISA Kit was based on standard sandwich enzyme-linked immune-sorbent assa           |
|                  | technology. A monoclonal antibody from rat specific for IL7R has been precoated onto 96-well    |
|                  | plates. Standards(NSO, E21-D239) and test samples are added to the wells, a biotinylated        |
|                  | detection polyclonal antibody from goat specific for IL7R is added subsequently and then        |
|                  | followed by washing with PBS or TBS buffer. Avidin-Biotin-Peroxidase Complex was added and      |
|                  | unbound conjugates were washed away with PBS or TBS buffer. HRP substrate TMB was use           |
|                  | to visualize HRP enzymatic reaction. TMB was catalyzed by HRP to produce a blue color           |
|                  | product that changed into yellow after adding acidic stop solution. The density of yellow is    |
|                  | proportional to the mouse IL7R amount of sample captured in plate.                              |
| Assay Procedure: | Aliquot 0.1 mL per well of the 20000pg/mL, 10000pg/mL, 5000pg/mL, 2500pg/mL,                    |
|                  | 1250pg/mL, 625pg/mL, 312pg/mL mouse IL7R standard solutions into the precoated 96-well          |
|                  | plate. Add 0.1 mL of the sample diluent buffer into the control well (Zero well). Add 0.1 mL of |
|                  | each properly diluted sample of mouse cell culture supernates or serum to each empty well.      |
|                  | See "Sample Dilution Guideline" above for details. It is recommended that each mouse IL7R       |
|                  | standard solution and each sample be measured in duplicate.                                     |
| Assay Precision: | Sample 1: n=16, Mean(ng/ml): 2, Standard deviation: 0.114, CV(%): 5.7                           |
|                  | • Sample 2: n=16, Mean(ng/ml): 6.5, Standard deviation: 0.442, CV(%): 6.8                       |
|                  | • Sample 3: n=16, Mean(ng/ml): 12.8, Standard deviation: 0.576, CV(%): 4.5,                     |
|                  | • Sample 1: n=24, Mean(ng/ml): 2.3, Standard deviation: 0.145, CV(%): 6.3                       |
|                  | • Sample 2: n=24, Mean(ng/ml): 7.3, Standard deviation: 0.555, CV(%): 7.6                       |
|                  | Sample 3: n=24, Mean(ng/ml): 14.5, Standard deviation: 0.725, CV(%): 5                          |
| Restrictions:    | For Research Use only   |
| Handling         |   |
| Handling Advice: | Avoid multiple freeze-thaw cycles.  |
| Storage:         | -20 °C,4 °C   |
| Storage Comment: | Store at 4°C for 6 months, at -20°C for 12 months. Avoid multiple freeze-thaw cycles            |
| Expiry Date:     | 12 months   |
|                  |   |

# 

#### **ELISA**

**Image 1.** Mouse IL7R/CD127 PicoKine ELISA Kit standard curve