



[Go to Product page](#)

Datasheet for ABIN4986952

IL2R ELISA Kit

1 Image

Overview

Quantity:	96 tests
Target:	IL2R
Reactivity:	Human
Method Type:	Sandwich ELISA
Detection Range:	31.25-2000 pg/mL
Minimum Detection Limit:	31.25 pg/mL
Application:	ELISA

Product Details

Sample Type:	Cell Culture Supernatant, Serum, Plasma (heparin), Plasma (citrate), Plasma (EDTA)
Analytical Method:	Quantitative
Detection Method:	Colorimetric
Specificity:	Natural and recombinant Human IL-2R Ligand
Sensitivity:	15 pg/mL
Material not included:	<ul style="list-style-type: none">• Microplate reader.• Pipettes and pipette tips.• EP tube Deionized or distilled water.

Target Details

Target:	IL2R
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Target Details

Alternative Name: IL-2R ([IL2R Products](#))

Background: The biological activities of IL-2 are mediated by its binding to a multi-molecular cellular receptor complex. For several years the receptor was thought to consist of two glycoprotein chains, an alpha chain (IL-2 R α) and a beta chain (IL-2 R β) (1 - 3), which acted together to form a high affinity receptor that transduced the IL-2 signal. IL-2 R α (also known as Tac antigen and as CD25) is a 55 kDa transmembrane glycoprotein composed of 351 amino acids with only 13 located on the cytoplasmic side of the membrane (4 - 6). The second chain of the complex was cloned in 1989 (7), and is a transmembrane glycoprotein of 575 amino acids (75 kDa), 286 of which are located cytoplasmically and clearly participate in signal transduction (8, 9). Eventually it was discovered that a third chain, IL-2 R γ , was necessary for high affinity binding, ligand internalization and signalling. Constitutively expressed on many lymphoid cells, it had been overlooked partly because it has no affinity for IL-2 except when IL-2 R β is present (7, 10, 11). When cloned, the gene was found to code for a 64 kDa transmembrane protein of 347 amino acids, 84 of which are cytoplasmic (12). Both IL-2 R β and IL-2 R γ are members of the hematopoietin receptor superfamily, whereas IL-2 R α is related only to the IL-15 R α chain (13 - 15). A model of the IL-2 receptor complex (3, 9, 16 - 21) would describe the high affinity receptor as an $\alpha\beta\gamma$ trimer, in which all three chains are in contact with the ligand. Alone, IL-2 R α binds IL-2 with low affinity, but is unable to transduce a signal. The $\alpha\beta$ combination will bind IL-2 with intermediate affinity, but still will not transduce a signal. A $\beta\gamma$ complex has intermediate affinity and is capable of signalling if the IL-2 concentration is relatively high. Regardless of many subtleties that determine the affinity of the ligand for the extracellular portions of the receptor components (22 - 24), signalling will ensue if the β and γ cytoplasmic domains are brought into close proximity (25 - 27). A soluble form of IL-2 R α appears in serum, concomitant with its increased expression on cells (18, 28, 29). There are reports of a soluble form of IL-2 R β as well (28, 30). The function of the soluble IL-2 R α is unclear, since it would be expected to be a poor inhibitor of IL-2 because of its low binding affinity. In any case, increased levels of the soluble IL-2 R α in biological fluids reportedly correlate with increased T and B cell activation and immune system activation. Results of a number of studies suggest a correlation of levels of IL-2 sR α in serum with the onset of rejection episodes in allograft recipients (18, 31 - 33), with activity of autoimmune diseases such as rheumatoid arthritis and systemic lupus erythematosus (SLE) (34) and with the course of some leukemias and lymphomas (35 - 40).

Application Details

Application Notes: Detection Wavelength: 450 nm

Sample Volume: 20 μ L

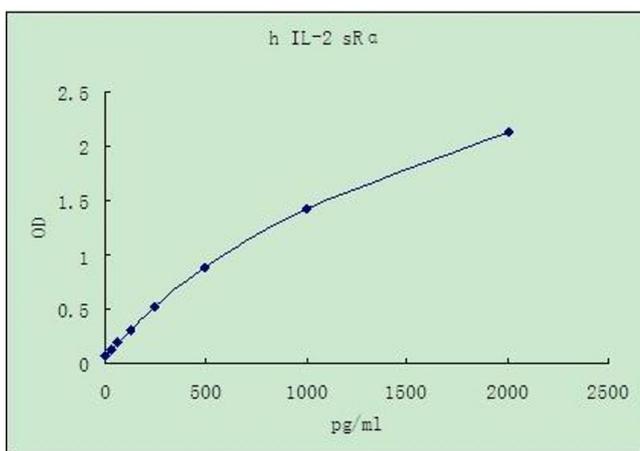
Application Details

Assay Time:	3 h
Plate:	Pre-coated
Restrictions:	For Research Use only

Handling

Storage:	4 °C
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Images



ELISA

Image 1.