Anti-Human IL-2 Receptor alpha Antibody [PS00-52] - BSA and Azide free (Capture)

HA721280

Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human
Applications:	ELISA(Cap)
Molecular Wt:	Predicted band size: 31 kDa
Clone number:	PS00-52

Description: Interleukin-2 receptor alpha chain (also called CD25) is the human protein encoded by the IL2RA gene. The interleukin 2 (IL2) receptor alpha (IL2RA) and beta (IL2RB) chains, together with the common gamma chain (IL2RG), constitute the high-affinity IL2 receptor. Homodimeric alpha chains (IL2RA) result in low-affinity receptor, while homodimeric beta (IL2RB) chains produce a medium-affinity receptor. Normally an integral-membrane protein, soluble IL2RA has been isolated and determined to result from extracellular proteolysis. Alternately-spliced IL2RA mRNAs have been isolated, but the significance of each is currently unknown. It is a type I transmembrane protein present on activated T cells, activated B cells, some thymocytes, myeloid precursors, and oligodendrocytes. IL2RA is expressed in most B-cell neoplasms, some acute nonlymphocytic leukemias, neuroblastomas, mastocytosis and tumor infiltrating lymphocytes. It functions as the receptor for HTLV-1 and is consequently expressed on neoplastic cells in adult T cell lymphoma/leukemia. Its soluble form, called sIL-2R may be elevated in these diseases and is occasionally used to track disease progression. Infection by the protozoan Trypanosoma cruzi causes Chagas disease, characterized by a reduction in the amount of IL2RA expressed on the surface of immune cells. This leads to chronic immune suppression, becoming increasingly severe over the course of many years and ultimately resulting in death if left untreated.

Immunogen:	Recombinant protein within full length human IL2 Receptor alpha.
Positive control:	Recombinant IL-2 Receptor alpha protein
Subcellular location:	Membrane.
Database links:	SwissProt: P01589 Human
Recommended Dilutions:	
ELISA (Cap)	Use at an assay dependent concentration. Can be paired for Sandwich ELISA with Rabbit monoclonal [PS01-03] to IL-2 Receptor alpha (Detector) (HA721281).
Storage Buffer:	PBS (pH7.4).
Storage Instruction:	Store at +4℃ after thawing. Aliquot store at -20℃. Avoid repeated freeze / thaw cycles.
Purity:	Protein A affinity purified.

Images

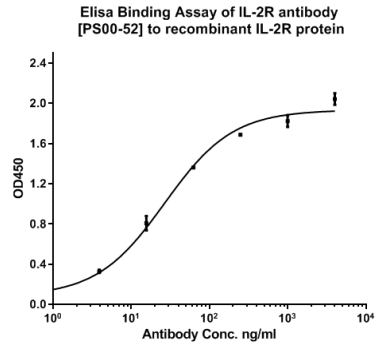

Fig1: The binding activity of IL-2 Receptor alpha (HA721280) with recombinant IL-2 Receptor alpha protein.

Immobilized recombinant IL-2 Receptor alpha protein at 1 μg/ml overnight at 4℃. Then blocked with 1xTBS/1%BSA for 1 hour at 37℃, and incubated with the primary antibody (HA721280) for 45min at 37℃. Then the plate was washed and incubated with 50 μl per well of Goat anti-Rabbit IgG-HRP for 0.5 hour at 37℃. Detection was performed using an Ultra TMB Substrate for 10 minutes at room temperature in the dark. The reaction was stopped with sulfuric acid and absorbances were read on a spectrophotometer at 450 nm.

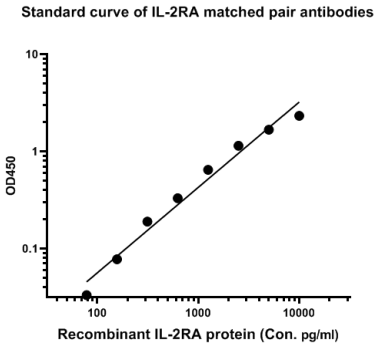

Fig2: Standard curve of IL-2 Receptor alpha matched pair antibodies:

Sandwich ELISA analysis of IL-2 Receptor alpha matched pair antibodies Elisa assay was performed by coating wells of a 96-well plate with 50 μl per well of capture antibody HA721280 [PS00-52] diluted in carbonate/bicarbonate buffer, at a concentration of 4 μg/mL overnight at 4℃. Wells of the plate were washed, blocked with 150 μl 1% BSA/PBST blocking buffer, and incubated with serial diluted recombinant IL-2 Receptor alpha protein starting from 2000 pg/ml to 31.25 pg/ml for 1 hour at 37℃. The plate was washed and incubated with 50 μl per well of detect antibody [PS01-03] (Biotin, 1:2,000) for 1 hour at 37℃. Then the plate was washed and incubated with 50 μl per well of Streptavidin-HRP for 0.5 hour at 37℃. Detection was performed using an Ultra TMB Substrate for 10 minutes at room temperature in the dark. The reaction was stopped with sulfuric acid and absorbances were read on a spectrophotometer at 450 nm.

Note: All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE".

Background References

1. Triplett, Todd A.; et al. (July 2012). "Defining a functionally distinct subset of human memory CD4+ T cells that are CD25POS and FOXP3NEG". European Journal of Immunology. 42 (7): 1893–905.
2. Bezrodnik L., Caldirola M.S., Seminario A.G., Moreira I., Gaillard M.I. Follicular bronchiolitis as phenotype associated with CD25 deficiency. Clin. Exp. Immunol. 175:227-234 (2014)