

Anti-IL-2 Receptor alpha/IL2ra Antibody Picoband®

Catalog Number: A00214-1

About IL2ra

IL2RA (Interleukin 2 receptor, alpha), also called IL2R, IL2R, Alpha Chain or CD25, is a protein that in humans is encoded by the IL2RA gene. The IL2RA gene is mapped on 10p15.1. IL2RA is composed of strand-swapped "sushi-like" domains, unlike the classical cytokine receptor fold. As a result of this domain swap, IL2RA uses a composite surface to dock into a groove on IL2 that also serves as a binding site for antagonist drugs. 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. 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.

Overview

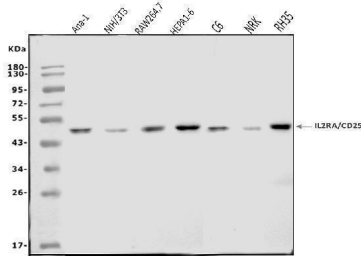
Product Name	Anti-IL-2 Receptor alpha/IL2ra Antibody Picoband®
Reactive Species	Mouse, Rat
Description	Boster Bio Anti-IL-2 Receptor alpha/IL2ra Antibody Picoband® catalog # A00214-1. Tested in Flow Cytometry, IHC, WB applications. This antibody reacts with Mouse, Rat. The brand Picoband indicates this is a premium antibody that guarantees superior quality, high affinity, and strong signals with minimal background in Western blot applications. Only our best-performing antibodies are designated as Picoband, ensuring unmatched performance.
Application	Flow Cytometry, IHC, WB
Clonality	Polyclonal
Formulation	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na ₂ HPO ₄ .
Storage Instructions	At -20°C for one year from date of receipt. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for six months. Avoid repeated freezing and thawing.
Host	Rabbit
Uniprot ID	P01590

Technical Details

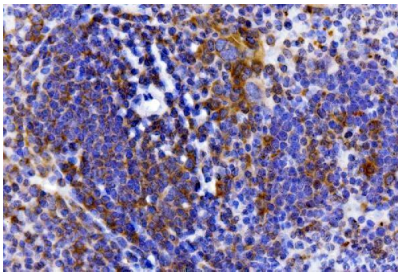
Immunogen	A synthetic peptide corresponding to a sequence in the middle region of mouse IL-2 Receptor alpha/IL2ra, which shares 64.3% and 86.7% amino acid (aa) sequence identity with human and rat IL-2 Receptor alpha/IL2ra, respectively.
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot, and HRP Conjugated anti-Rabbit IgG Super Vision Assay Kit (SV0002-1) for IHC(P).
Cross Reactivity	No cross-reactivity with other proteins.

Isotype	Rabbit IgG
Form	Lyophilized
Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.
Purification	Immunogen affinity purified.
Suggested Dilutions	Western blot, 0.25-0.5 ug/ml, Mouse, Rat Immunohistochemistry(Paraffin-embedded Section), 2-5 ug/ml, Mouse, Rat Flow Cytometry (Fixed), 1-3 ug/1x10 ⁶ cells, Mouse

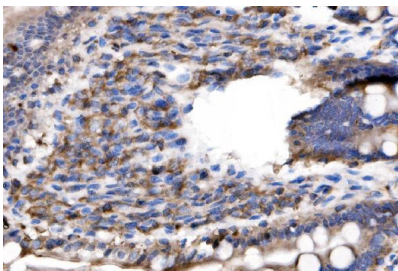
Anti-IL-2 Receptor alpha/IL2ra Antibody Picoband® (A00214-1) Images



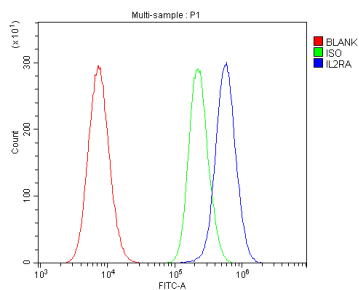
Western blot analysis of IL-2 Receptor alpha/IL2ra using anti-IL-2 Receptor alpha/IL2ra antibody (A00214-1). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions. Lane 1: mouse ANA-1 whole cell lysates, Lane 2: mouse NIH/3T3 whole cell lysates, Lane 3: mouse RAW264.7 whole cell lysates, Lane 4: mouse HEPA1-6 whole cell lysates, Lane 5: rat C6 whole cell lysates, Lane 6: rat NRK whole cell lysates, Lane 7: rat RH35 whole cell lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-IL-2 Receptor alpha/IL2ra antigen affinity purified polyclonal antibody (Catalog # A00214-1) at 0.5 ug/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1002) with Tanon 5200 system. A specific band was detected for IL-2 Receptor alpha/IL2ra at approximately 50 kDa. The expected band size for IL-2 Receptor alpha/IL2ra is at 50 kDa.



IHC analysis of IL-2 Receptor alpha/IL2ra using anti-IL-2 Receptor alpha/IL2ra antibody (A00214-1). IL-2 Receptor alpha/IL2ra was detected in a paraffin-embedded section of mouse spleen tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-IL-2 Receptor alpha/IL2ra Antibody (A00214-1) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) (Catalog # SA1022) with DAB as the chromogen.



IHC analysis of IL-2 Receptor alpha/IL2ra using anti-IL-2 Receptor alpha/IL2ra antibody (A00214-1). IL-2 Receptor alpha/IL2ra was detected in a paraffin-embedded section of rat small intestine tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-IL-2 Receptor alpha/IL2ra Antibody (A00214-1) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) (Catalog # SA1022) with DAB as the chromogen.



Flow Cytometry analysis of HEPA1-6 cells using anti-IL-2 Receptor alpha/IL2ra antibody (A00214-1). Overlay histogram showing HEPA1-6 cells stained with A00214-1 (Blue line). The cells were fixed with 4% paraformaldehyde and blocked with 10% normal goat serum. And then incubated with rabbit anti-IL-2 Receptor alpha/IL2ra Antibody (A00214-1, 1 ug/1x10⁶ cells) for 30 min at 20°C. DyLight® 488 conjugated goat anti-rabbit IgG (BA1127, 5-10 ug/1x10⁶ cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG (1 ug/1x10⁶) used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.

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Anti-IL-2 Receptor alpha/IL2ra Antibody

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