APB510Hu61 100μg
Active Interleukin 5 Receptor Alpha (IL5Ra)
Organism Species: *Homo sapiens* (Human)
Instruction manual

FOR RESEARCH USE ONLY
NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

13th Edition (Revised in Aug, 2023)

[PROPERTIES]

Source: Eukaryotic expression.
Host: 293F cell
Residues: Asp21~Trp342
Tags: N-terminal His-tag
Purity: >80%
Endotoxin Level: <1.0EU per 1μg (determined by the LAL method).
Buffer Formulation: PBS, pH7.4, containing 5% Trehalose .
Original Concentration: 200μg/mL
Applications: Activity Assays.
(May be suitable for use in other assays to be determined by the end user.)
Predicted isoelectric point: 5.6
Predicted Molecular Mass: 38.4kDa
Accurate Molecular Mass: 48kDa as determined by SDS-PAGE reducing conditions.
Phenomenon explanation:
The possible reasons that the actual band size differs from the predicted are as follows:

1. Splice variants: Alternative splicing may create different sized proteins from the same gene.
2. Relative charge: The composition of amino acids may affects the charge of the protein.
3. Post-translational modification: Phosphorylation, glycosylation, methylation etc.
4. Post-translation cleavage: Many proteins are synthesized as pro-proteins, and then cleaved to give the active form.
5. Polymerization of the target protein: Dimerization, multimerization etc.

[USAGE]

Reconstitute in 10mM PBS (pH7.4) to a concentration of 0.1-1.0 mg/mL. Do not vortex.

[STORAGE AND STABILITY]

Storage: Avoid repeated freeze/thaw cycles.
Store at 2-8°C for one month.
Aliquot and store at -80°C for 12 months.

Stability Test: The thermal stability is described by the loss rate. The loss rate was determined by accelerated thermal degradation test, that is, incubate the protein at 37°C for 48h, and no obvious degradation and precipitation were observed. The loss rate is less than 5% within the expiration date under appropriate storage condition.

[SEQUENCE]

DLLPDEKISLLPPVNFTIKVTGLAQVLLQWKPNPDQEQRNVNLEYQVKINAPKEDDYETRITESKC
VTILHKGFSASVRTILQNDHSLLASSWASAELHAPPGSPGTSIVNLTCTTNTTEDNYSRLRSYQVSL
HCTWLVGTDAPEDTQYFLYYRYGSWTEECQEYSKDTLGRNIACWFPRTFILSKGRDWLAVLVN
GSSKHSAIRPFDQLFALHAIDQINPPLNVTAEIEGTRLSIQWEKPVSAFPIHCFDYEVKIHNTRNGY
LQIEKLMTNAFISIIDDLSKYDVQVRAAVSSMCREAGLWSEWSQPIYVGNDEHKPLREW

[ACTIVITY]

Interleukin 5 Receptor Alpha (IL5Ra) is a transmembrane glycoprotein encoded by the IL5RA gene, serving as the specific subunit of the IL-5 receptor complex. Expressed primarily on eosinophils, basophils, and B lymphocytes, it mediates the biological effects of IL-5, a key cytokine in allergic inflammation and eosinophil homeostasis. IL5Ra forms a heterodimer with the common beta chain (β c) to constitute the functional receptor, enabling signal transduction via JAK/STAT pathways. Dysregulation of IL5Ra is linked to eosinophilic disorders, asthma, and allergic diseases, making it a therapeutic target for anti-allergy and anti-inflammatory drugs. IL5 binds specifically to IL5Ra with high affinity, inducing receptor dimerization and activating downstream signaling cascades that promote

eosinophil survival and activation. Briefly, IL5 was diluted serially in PBS with 0.01% BSA (pH 7.4). Duplicate samples of 100 μl were then transferred to IL5Ra-coated microtiter wells and incubated for 1h at 37℃. Wells were washed with PBST and incubated for 1h with anti-IL5 pAb, then aspirated and washed 3 times. After incubation with HRP labelled secondary antibody for 1h at 37℃, wells were aspirated and washed 5 times. With the addition of substrate solution, wells were incubated 15-25 minutes at 37℃. Finally, add 50 μL stop solution to the wells and read at 450/630nm immediately.Measured by its binding ability in a functional ELISA. When Recombinant IL5Ra is Immobilized at 2 μg/mL(100 uLwell), the concentration of IL5 that produces 50% optimal bindingresponse is found to be approximately 0.0930 μg/mL.

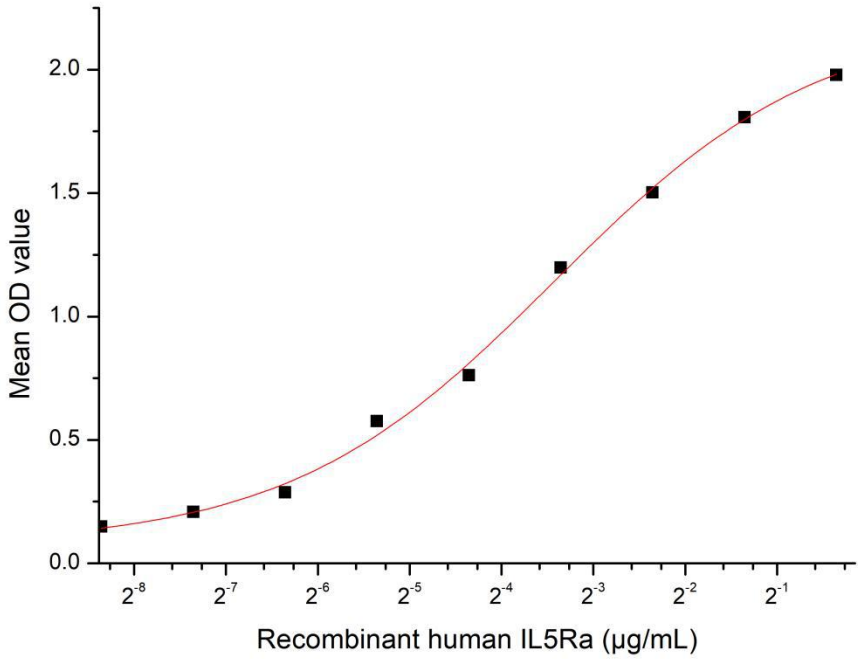


Figure 1. The binding activity of recombinant IL5 and IL5Ra

[IDENTIFICATION]

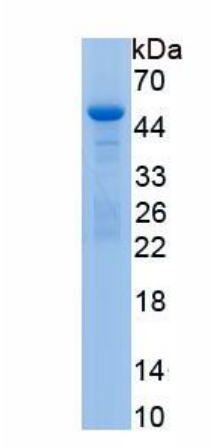


Figure 2. SDS-PAGE

Sample: Active recombinant IL5Ra, Human

[IMPORTANT NOTE]

The kit is designed for research use only, we will not be responsible for any issue if the kit was used in clinical diagnostic or any other procedures.