Human IL-13 Rα2 Antibody
Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF146

**DESCRIPTION**

**Species Reactivity:** Human

**Specificity:** Detects human IL-13 Rα2 in direct ELISAs and Western blots. In direct ELISAs, approximately 5% cross-reactivity with recombinant mouse IL-13 Rα2 is observed and less than 1% cross-reactivity with recombinant human IL-13 Rα1 is observed.

**Source:** Polyclonal Goat IgG

**Purification:** Antigen Affinity-purified

**Immunogen:** Mouse myeloma cell line NS0-derived recombinant human IL-13 Rα2

**Cys22-Leu342**

**Accession #** Q14627

**Endotoxin Level:** <0.10 EU per 1 μg of the antibody by the LAL method.

**Formulation:** Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.

*Small pack size (SP) is supplied either lyophilized or as a 0.2 μm filtered solution in PBS.

**APPLICATIONS**

Please Note: Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.

<table>
<thead>
<tr>
<th>APPLICATION</th>
<th>Recommended Concentration</th>
<th>Sample</th>
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<tbody>
<tr>
<td>Western Blot</td>
<td>0.2 μg/mL</td>
<td>See Below</td>
</tr>
<tr>
<td>Flow Cytometry</td>
<td>2.5 μg/10^6 cells</td>
<td>A375 human melanoma cell line</td>
</tr>
<tr>
<td>Immunohistochemistry</td>
<td>5-15 μg/mL</td>
<td>See Below</td>
</tr>
<tr>
<td>Simple Western</td>
<td>10 μg/mL</td>
<td>See Below</td>
</tr>
<tr>
<td>CyTOF-ready</td>
<td>Ready to be labeled</td>
<td>using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation.</td>
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</tbody>
</table>

**Blockade of Receptor-ligand Interaction**

In a functional ELISA, 2-6 μg/mL of this antibody will block 50% of the binding of 100 ng/mL of Recombinant Human IL-13 (Catalog # 213-ILB) to immobilized Recombinant Human IL-13 Rα2 Fc Chimera (Catalog # 614-INS) coated at 4 μg/mL (100 μL/well). At 40 μg/mL, this antibody will block >90% of the binding.

**DATA**

**Western Blot**

**Detection of Human IL-13 Rα2 by Western Blot.** Western blot shows lysates of human placenta tissue and human testis tissue. PVDF membrane was probed with 0.2 μg/mL of Goat Anti-Human IL-13 Rα2 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF146) followed by HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF017). A specific band was detected for IL-13 Rα2 at approximately 50-55 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1 conditions and using Immunoblot Buffer Group 1 conditions.

**Immunohistochemistry**

IL-13 Rα2 in Human Prostate Cancer Tissue. IL-13 Rα2 was detected in immersion fixed paraffin-embedded sections of human prostate cancer tissue using Goat Anti-Human IL-13 Rα2 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF146) at 5 μg/mL, overnight at 4 °C. Tissue was stained using the Anti-Goat HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS008) and counterstained with hematoxylin (blue). Specific staining was localized to glandular epithelial cells. View our protocol for Chromogenic IHC Staining of Paraffin-embedded Tissue Sections.

**Simple Western**

**Detection of Human IL-13 Rα2 by Simple Western.** Simple Western lane view shows lysates of human placenta tissue and human testis tissue, loaded at 0.2 mg/mL. A specific band was detected for IL-13 Rα2 at approximately 40 kDa (as indicated) using 10 μg/mL of Goat Anti-Human IL-13 Rα2 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF146) followed by 1:50 dilution of HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF109). This experiment was conducted under reducing conditions and using the 10-230 kDa separation system.
**PREPARATION AND STORAGE**

Reconstitution

Reconstitute at 0.2 mg/mL in sterile PBS.

Shipping

The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (SP) is shipped with polar packs. Upon receipt, store it immediately at 20 to 70 °C*

Stability & Storage

Use a manual defrost freezer and avoid repeated freeze-thaw cycles.

- 12 months from date of receipt, -20 to -70 °C as supplied.
- 1 month, 2 to 8 °C under sterile conditions after reconstitution.
- 6 months, -20 to -70 °C under sterile conditions after reconstitution.

**BACKGROUND**

Two type 1 membrane proteins belonging to the hemopoietin receptor family have been cloned and shown to bind IL-13 with differing affinities. The lower affinity IL-13 binding protein, previously designated IL-13 Rα, IL-13 Rα1 or NR4, is now referred to as IL-13 Rα1. The high affinity IL-13 binding protein, previously also designated IL-13 R or IL-13 Rα2, is now referred to as IL-13 Rα2. Human IL-13 Rα2 was originally cloned from the Caki-1 human renal carcinoma cell line. The IL-13 Rα2 cDNA encodes a 380 amino acid (aa) residue precursor protein with a putative 26 aa residue signal peptide, a 317 residue extracellular domain, a 20 aa residue transmembrane region and a 17 aa residue cytoplasmic tail. Human and mouse IL-13 Rα2 share 59% aa sequence identity. The extracellular domain of IL-13 Rα2 is also closely related to that of IL-13 Rα1. However, the 17 aa residue cytoplasmic domain of IL-13 Rα2 is much shorter than that of IL-13 Rα1, suggesting that the two receptors are functionally distinct. IL-13 Rα1 has been shown to combine with the IL-4 R to form a high-affinity receptor complex capable of transducing an IL-13-dependent proliferative signal. The role of IL-13 Rα2 in IL-13 signaling remains to be elucidated. The amino-terminal 27 aa residues of the human and mouse IL-13 Rα2 are nearly identical to that of a soluble mouse IL-13 binding protein purified from mouse serum and urine.

References: