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.

**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>Sample</th>
<th>Recommended Concentration</th>
<th>Sample</th>
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</thead>
<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/10⁶ 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 using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation.</td>
<td></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.

**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 59 kDa (as indicated) using 10 µg/mL of Goat Anti-Human IL-13 Rα2 Antibody Affinity-purified Polyclonal Go (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 12-230 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 type1 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 Rαl 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: