

## DESCRIPTION

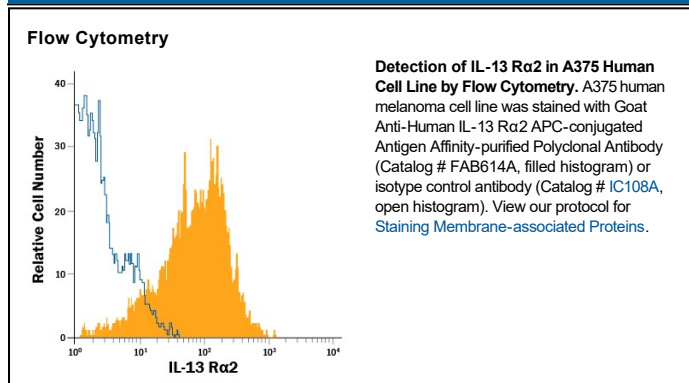
<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human IL-13 R $\alpha$ 2 in direct ELISAs and Western blots. In direct ELISAs and Western blots, approximately 5% cross-reactivity with recombinant mouse IL-13 R $\alpha$ 2 is observed.
<b>Source</b>	Polyclonal Goat IgG
<b>Purification</b>	Antigen Affinity-purified
<b>Immunogen</b>	Mouse myeloma cell line NS0-derived recombinant human IL-13 R $\alpha$ 2 Cys22-Leu342 Accession # Q14627
<b>Conjugate</b>	Allophycocyanin Excitation Wavelength: 620-650 nm Emission Wavelength: 660-670 nm
<b>Formulation</b>	Supplied in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details.  *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

## 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.

	<b>Recommended Concentration</b>	<b>Sample</b>
<b>Flow Cytometry</b>	10 $\mu$ L/10 <sup>6</sup> cells	See Below

## DATA



## PREPARATION AND STORAGE

<b>Shipping</b>	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
<b>Stability &amp; Storage</b>	<b>Protect from light. Do not freeze.</b> <ul style="list-style-type: none"> <li>12 months from date of receipt, 2 to 8 °C as supplied.</li> </ul>

## BACKGROUND

Interleukin-13 Receptor alpha 2 (IL-13 R $\alpha$ 2), also CD213 $\alpha$ 2, is a 55-57 kDa member of the type I cytokine receptor family of molecules. Human IL-13 R $\alpha$ 2 is a 354 amino acid (aa) type I transmembrane glycoprotein that contains a 317 aa extracellular domain (ECD) characterized by three fibronectin type III domains (aa 27-343). It is expressed by a limited number of cell types, principally those associated with the respiratory system. These cells include fibroblasts, type II alveolar and visceral smooth muscle cells, pseudostratified ciliated epithelium, goblet cells and possibly monocytes. Notably, IL-13 R $\alpha$ 2 is often found to be intracellular, rather than plasma membrane expressed, and this may reflect storage deposits that can be quickly accessed when needed. IL-13 R $\alpha$ 2 is one of two IL-13Rs that bind IL-13. The principal, but low affinity receptor for IL-13 is a 65 kDa transmembrane protein termed IL-13 R $\alpha$ 1. Following binding to IL-13, this protein complexes with an adjacent IL-4 R $\alpha$  receptor on the cell surface to form a high affinity, functional receptor signaling complex for IL-13. Within this system, IL-13 R $\alpha$ 2 has been described as a "decoy receptor" that binds to circulating IL-13, rendering it unavailable for IL-13 R $\alpha$ 1 binding. Supporting this view is the fact that there does not appear to be any canonical signaling motif in IL-13 R $\alpha$ 2s short cytoplasmic tail, and the fact that soluble IL-13 R $\alpha$ 2 will bind to IL-13 and neutralize its effects on target cells in culture. The latter point is of particular importance when it is recognized that IL-13 R $\alpha$ 2 has a naturally circulating soluble splice form in mouse. Studies in human, however, suggest a more complicated situation. First, it is unclear if human actually has circulating IL-13 R $\alpha$ 2. Unlike in mouse, there is no potential alternative splice form in human that could generate a soluble isoform. And while MMP-8 has been identified as a potential mediator of IL-13 R $\alpha$ 2 proteolytic cleavage, such activity would appear to generate rather small quantities of soluble IL-13 R $\alpha$ 2. As a transmembrane protein, IL-13 R $\alpha$ 2 is suggested to interact with IL-4 R $\alpha$ , and this likely will result in a downregulation of IL-13 activity. Thus, IL-13 R $\alpha$ 2, while not a decoy receptor, could act as a negative modulator of IL-13 signaling. On the other hand, the cytoplasmic tail of IL-13 R $\alpha$ 2 is now believed to stimulate AP-1 activity, and the IL-13:IL-13 R $\alpha$ 2 transmembrane complex has been identified as a component of a larger signaling receptor complex for the GH-18 (Glycosyl Hydrolase 18) family member YKL40/Chi3L1. As such, IL-13 R $\alpha$ 2 is likely to exhibit multiple actions in a system and species-specific manner. Over aa 27-342, human and mouse IL-13 R $\alpha$ 2 share 64% aa sequence identity.