

# Anti-IL13 Picoband Antibody

Catalog # ABO10015

## Product Information

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|--------------------------|----------------------------------------------------------------------------------------------------|
| <b>Application</b>       | WB, IHC-P                                                                                          |
| <b>Primary Accession</b> | <a href="#">P35225</a>                                                                             |
| <b>Host</b>              | Rabbit                                                                                             |
| <b>Reactivity</b>        | Human                                                                                              |
| <b>Clonality</b>         | Polyclonal                                                                                         |
| <b>Format</b>            | Lyophilized                                                                                        |
| <b>Description</b>       | Rabbit IgG polyclonal antibody for Interleukin-13(IL13) detection. Tested with WB, IHC-P in Human. |

**Reconstitution** Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

## Additional Information

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| <b>Gene ID</b>                  | 3596                                                                                                                                                                               |
| <b>Other Names</b>              | Interleukin-13, IL-13, IL13, NC30                                                                                                                                                  |
| <b>Calculated MW</b>            | 15788                                                                                                                                                                              |
| <b>Application Details</b>      | Immunohistochemistry(Paraffin-embedded Section), 0.5-1 $\mu$ g/ml, Human, By Heat<br><br>Western blot, 0.1-0.5 $\mu$ g/ml, Human                                                   |
| <b>Subcellular Localization</b> | Secreted.                                                                                                                                                                          |
| <b>Source</b>                   | Eukaryota                                                                                                                                                                          |
| <b>Protein Name</b>             | Interleukin-13                                                                                                                                                                     |
| <b>Contents</b>                 | Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na <sub>2</sub> HPO <sub>4</sub> , 0.05mg NaN <sub>3</sub> .                                                                         |
| <b>Immunogen</b>                | E. coli-derived human IL13 recombinant protein (Position: P36-N146). Human IL13 shares 55.3% and 61.9% amino acid (aa) sequence identity with mouse and rat IL13, respectively.    |
| <b>Purification</b>             | Immunogen affinity purified.                                                                                                                                                       |
| <b>Cross Reactivity</b>         | No cross reactivity with other proteins                                                                                                                                            |
| <b>Storage</b>                  | At -20 °C for one year. After reconstitution, at 4 °C for one month. It can also be aliquotted and stored frozen at -20 °C for a longer time. Avoid repeated freezing and thawing. |

## Protein Information

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| Name              | IL13                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Synonyms          | NC30                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Function          | Cytokine that plays important roles in allergic inflammation and immune response to parasite infection (PubMed: <a href="#">8096327</a> , PubMed: <a href="#">8097324</a> ). Synergizes with IL2 in regulating interferon-gamma synthesis (PubMed: <a href="#">8096327</a> ). Stimulates B-cell proliferation, and activation of eosinophils, basophils, and mast cells (PubMed: <a href="#">7903680</a> , PubMed: <a href="#">8759755</a> ). Plays an important role in controlling IL33 activity by modulating the production of transmembrane and soluble forms of interleukin-1 receptor-like 1/IL1RL1 (By similarity). Displays the capacity to antagonize Th1-driven proinflammatory immune response and downregulates synthesis of many proinflammatory cytokines including IL1, IL6, IL10, IL12 and TNF through a mechanism that partially involves suppression of NF-kappa-B (By similarity). Also functions on nonhematopoietic cells, including endothelial cells where it induces vascular cell adhesion protein 1/VCAM1, which is important in the recruitment of eosinophils (PubMed: <a href="#">8639787</a> ). Exerts its biological effects through its receptors which comprises the IL4R chain and the IL13RA1 chain, to activate JAK1 and TYK2, leading to the activation of STAT6 (PubMed: <a href="#">9013879</a> ). Aside from IL13RA1, another receptor IL13RA2 acts as a high affinity decoy for IL13 and mediates internalization and depletion of extracellular IL13 (PubMed: <a href="#">21622864</a> ). Induces inflammatory response in esophageal epithelium which results in a dysregulation of desmosome intercellular adhesion junctions, via down-regulation of DSG1 (PubMed: <a href="#">24220297</a> ). |
| Cellular Location | Secreted.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

## Background

Interleukin 13 is a protein that in humans is encoded by the IL-13 gene. It is a kind of cytokine secreted by many cell types, but especially T helper type 2 (Th2) cells, which is an important mediator of allergic inflammation and disease. The IL-13 gene is mapped to 5q23-q31. IL-13 induces its effects through a multi-subunit receptor that includes the alpha chain of the IL-4 receptor (IL-4R  $\alpha$ ) and at least one of two known IL-13-specific binding chains. Furthermore, this gene acts more prominently as a molecular bridge linking allergic inflammatory cells to the non-immune cells in contact with them, thereby altering physiological function.

## Images

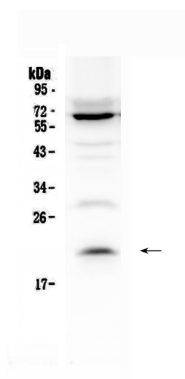


Figure 1. Western blot analysis of IL13 using anti-IL13 antibody (ABO10015). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions. Lane 1: K562 whole cell lysates. After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA 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-IL13 antigen affinity purified polyclonal antibody (Catalog # ABO10015) at 0.5  $\mu$ g/mL overnight at 4  $^{\circ}$ 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 1:10000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit with Tanon 5200 system. A specific band was detected for IL13 at approximately 20KD. The expected band size for IL13 is at 16KD.

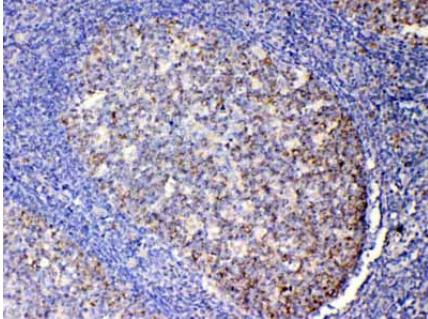


Figure 2. IHC analysis of IL13 using anti-IL13 antibody (ABO10015).IL13 was detected in paraffin-embedded section of human tonsil tissues. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1  $\mu$ g/ml rabbit anti-IL13 Antibody (ABO10015) overnight at 4  $^{\circ}$ C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37  $^{\circ}$ C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) with DAB as the chromogen.

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