

# Anti-IL-4 Antibody [A7D7]

HA601034



<b>Product Type:</b>	Mouse monoclonal IgG1, primary antibodies
<b>Species reactivity:</b>	Human
<b>Applications:</b>	ELISA
<b>Molecular Wt:</b>	Predicted band size: 17 kDa
<b>Clone number:</b>	A7D7

**Description:** The protein encoded by this gene is a pleiotropic cytokine produced by activated T cells. This cytokine is a ligand for interleukin 4 receptor. The interleukin 4 receptor also binds to IL13, which may contribute to many overlapping functions of this cytokine and IL13. STAT6, a signal transducer and activator of transcription, has been shown to play a central role in mediating the immune regulatory signal of this cytokine. This gene, IL3, IL5, IL13, and CSF2 form a cytokine gene cluster on chromosome 5q, with this gene particularly close to IL13. This gene, IL13 and IL5 are found to be regulated coordinately by several long-range regulatory elements in an over 120 kilobase range on the chromosome. IL4 is considered an important cytokine for tissue repair, counterbalancing the effects of proinflammatory type 1 cytokines, however, it also promotes allergic airway inflammation. Moreover, IL-4, a type 2 cytokine, mediates and regulates a variety of human host responses such as allergic, anti-parasitic, wound healing, and acute inflammation. This cytokine has been reported to promote resolution of neutrophil-mediated acute lung injury. In an allergic response, IL-4 has an essential role in the production of allergen-specific immunoglobulin (Ig) E. This pro-inflammatory cytokine has been observed to be increased in COVID-19 (Coronavirus disease 2019) patients, but is not necessarily associated with severe COVID-19 pathology. Two alternatively spliced transcript variants of this gene encoding distinct isoforms have been reported.

**Immunogen:** Recombinant protein within Human aa 20-153 / 153.

**Subcellular location:** Secreted.

**Database links:** SwissProt: P05112 Human

**Recommended Dilutions:**

**ELISA** 1:20,000

**Storage Buffer:** PBS (pH7.4), 0.1% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.

**Storage Instruction:** Shipped at 4°C. Store at +4°C short term (1-2 weeks). It is recommended to aliquot into single-use upon delivery. Store at -20°C long term.

**Purity:** Protein A affinity purified.

Hangzhou Huaan Biotechnology Co., Ltd.

Orders: 0086-571-88062880

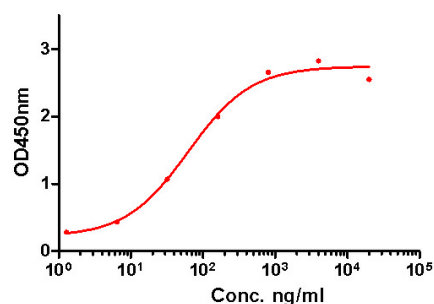
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Applications: WB=Western blot IHC-P=Immunohistochemistry (paraffin) IF-Cell=Immunofluorescence (Cell) IF-Tissue=Immunofluorescence (Tissue) FC=Flow cytometry IP=Immunoprecipitation

## Images

**Fig1:** IL-4 Antibody (HA601034) in indirect ELISA.

Indirect ELISA analysis of IL-4 was performed by coating wells of a 96-well plate with 50  $\mu$ l per well of IL-4 antigen diluted in carbonate/bicarbonate buffer, at a concentration of 1  $\mu$ g/mL overnight at 4°C. Wells of the plate were washed, blocked with StartingBlock blocking buffer, and incubated with 50  $\mu$ l per well of a mouse IL-4 monoclonal antibody starting at a concentration of 20  $\mu$ g/mL and serially diluting it to a concentration of 1.28 ng/mL for 2 hours at room temperature. The plate was washed and incubated with 50  $\mu$ l per well of an HRP-conjugated goat anti-mouse IgG secondary antibody at a dilution of 1:10,000 for one hour at room temperature. Detection was performed using an Ultra TMB Substrate for 5 minutes at room temperature in the dark. The reaction was stopped with sulfuric acid and absorbances were read on a spectrophotometer at 450 nm.

**Note:** All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE".

## Background References

1. Nguyen JK. et. al. The IL-4/IL-13 axis in skin fibrosis and scarring: mechanistic concepts and therapeutic targets. Arch Dermatol Res. 2020 Mar
2. Matsunaga MC. et. al. IL-4 and IL-13 Inhibition in Atopic Dermatitis. J Drugs Dermatol. 2016 Aug

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