

**IL-12A Antibody**  
**Catalog # ASC11706****Specification**

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**IL-12A Antibody - Product Information**

Application	WB
Primary Accession	<a href="#">P29459</a>
Other Accession	<a href="#">NP_000873</a> , <a href="#">24430219</a>
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	Predicted: 22 kDa
Application Notes	Observed: 22 kDa KDa IL-12A antibody can be used for detection of IL-12A by Western blot at 0.5 - 1 µg/ml.

**IL-12A Antibody - Additional Information**

Gene ID 3592

**Target/Specificity**

IL 12A; IL-12A antibody is human specific. IL-12A antibody will not cross-react with IL-12B.

**Reconstitution & Storage**

IL-12A antibody can be stored at 4°C for three months and -20°C, stable for up to one year.

**Precautions**

IL-12A Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

**IL-12A Antibody - Protein Information****Name** IL12A**Synonyms** NKSF1**Function**

Heterodimerizes with IL12B to form the IL-12 cytokine or with EBI3/IL27B to form the IL-35 cytokine (PubMed: [8943050](http://www.uniprot.org/citations/8943050), PubMed: [8605935](http://www.uniprot.org/citations/8605935)). IL-12 is primarily produced by professional antigen-presenting cells (APCs) such as B-cells and dendritic cells (DCs) as well as macrophages and granulocytes and regulates T-cell and natural killer-cell responses, induces the production of interferon-gamma (IFN-gamma), favors the differentiation of T-helper 1 (Th1) cells and is an important link between innate resistance and adaptive immunity (PubMed: [1673147](http://www.uniprot.org/citations/1673147), PubMed: [1674604](http://www.uniprot.org/citations/1674604), PubMed: [8605935](http://www.uniprot.org/citations/8605935)).

Mechanistically, exerts its biological effects through a receptor composed of IL12R1 and IL12R2 subunits (PubMed:<a href="http://www.uniprot.org/citations/8943050" target="\_blank">8943050</a>). Binding to the receptor results in the rapid tyrosine phosphorylation of a number of cellular substrates including the JAK family kinases TYK2 and JAK2 (PubMed:<a href="http://www.uniprot.org/citations/7528775" target="\_blank">7528775</a>). In turn, recruited STAT4 gets phosphorylated and translocates to the nucleus where it regulates cytokine/growth factor responsive genes (PubMed:<a href="http://www.uniprot.org/citations/7638186" target="\_blank">7638186</a>). As part of IL-35, plays essential roles in maintaining the immune homeostasis of the liver microenvironment and functions also as an immune-suppressive cytokine (By similarity). Mediates biological events through unconventional receptors composed of IL12RB2 and gp130/IL6ST heterodimers or homodimers (PubMed:<a href="http://www.uniprot.org/citations/22306691" target="\_blank">22306691</a>). Signaling requires the transcription factors STAT1 and STAT4, which form a unique heterodimer that binds to distinct DNA sites (PubMed:<a href="http://www.uniprot.org/citations/22306691" target="\_blank">22306691</a>).

### Cellular Location

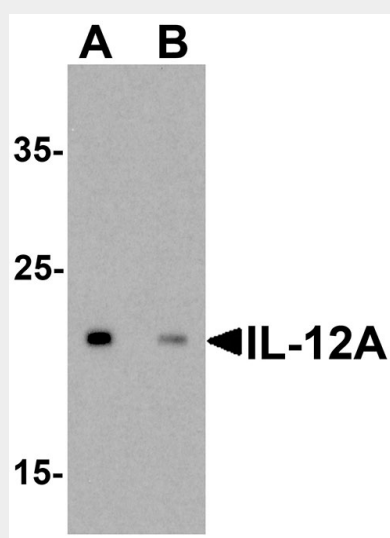
Secreted

### IL-12A Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

### IL-12A Antibody - Images



Western blot analysis of IL-12A in HeLa cell lysate with IL-12A antibody at 0.5 µg/ml in (A) the absence and (B) the presence of blocking peptide.

### IL-12A Antibody - Background

IL-12A is subunit of the cytokine IL-12 which acts on T- and natural killer cells, and has a broad array of biological activities. IL-12 is a disulfide-linked heterodimer composed of the 35-kD subunit and a 40-kD subunit that is a member of the cytokine receptor family (1). IL-12 is required for the T-cell-independent induction of interferon (IFN)-gamma, and is important for the differentiation of both Th1 and Th2 cells (1,2). The responses of lymphocytes to IL-12 are mediated by the activator of transcription protein STAT4 (2). Nitric oxide synthase 2A (NOS2A/NOS2) is found to be required for the signaling process of this cytokine in innate immunity (3).

#### **IL-12A Antibody - References**

Gee K, Guzzo C, Che Mat NF, et al. The IL-12 family of cytokines in infection, inflammation and autoimmune disorders. *Inflamm. Allergy Drug Targets* 2009; 8:40-52.  
Sinigaglia F, D'Ambrosio D, Panina-Bordignon P, et al. Regulation of the IL-12/IL-12R axis: a critical step in T-helper cell differentiation and effector function. *Immunol. Rev.* 1999; 170:65-72.  
Bogdan C, Rollinghoff M, and Diefenbach A. The role of nitric oxide in innate immunity. *Immunol. Rev.* 2000; 173:17-26.