

**Anti-Human IL-1 alpha (RABBIT) Antibody**  
**IL-1 Alpha Antibody**  
**Catalog # ASR4903****Specification**

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**Anti-Human IL-1 alpha (RABBIT) Antibody - Product Information**

Host	Rabbit
Conjugate	Unconjugated
Target Species	Human
Reactivity	Human
Clonality	Polyclonal
Application	WB, IHC, E, I, LCI
Application Note	This IgG fraction antibody of anti-Human IL-1a has been tested for use in immunoblotting. This antibody is suitable for use in ELISA, neutralizations, immunohistochemistry, and flow cytometry. It recognizes the 17,000 MW mature IL-1a. Reactivity in other immunoassays is unknown.
Physical State	Liquid (sterile filtered)
Buffer	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Immunogen	The whole rabbit serum used to produce this IgG fraction antibody was prepared by repeated immunizations with recombinant human IL-1a produced in E.coli. The MW of the recombinant IL-1a was 17,000. This is the cleavage site generated by the IL-1b converting enzyme (ICE, capase-1).
Preservative	0.01% (w/v) Sodium Azide

**Anti-Human IL-1 alpha (RABBIT) Antibody - Additional Information****Gene ID** 3552**Other Names**  
3552**Purity**

This antibody is primarily directed against the 17,000 MW human IL-1a and is useful in determining its presence in various assays. In general, this antibody also detects primate IL-1a in the same formats using similar dilutions. The antiserum does not recognize human IL-1b or Mouse or Rabbit IL-1a. In ELISA formats and other immunoreactive assays, this antibody will recognize both the mature 17,000 MW IL-1a as well as the 31,000 MW IL-1a precursor in either non-denatured (native) or denatured samples. Unlike the IL-1b precursor, the native precursor of IL-1a is recognized by the antibody produced to the 17,000 MW form. The 31,000 precursor of IL-1a is biologically active and is found primarily intracellularly. The precursor of IL-1a, unlike that of IL-1b, is biologically active when applied to cells and is thought to have a role as a functional molecule intracellularly and can be found constitutively expressed in various cell. This antibody is

also useful for neutralization of human and primate IL-1 $\alpha$  activity in bioassays. It does not neutralize the biological activity IL-1 $\beta$ . It does not neutralize the biological activity of mouse, rat or rabbit IL-1 $\alpha$ . It will neutralize primate IL-1 $\alpha$ . For neutralization, it is recommended to incubate the sample with a 1:100 dilution of the antibody for at least 4 hours before being tested. A control of similarly diluted normal rabbit IgG is recommended. This antibody can be used for FACS analysis. Caution should be exhibited as the Fc domain of the rabbit IgG molecule may interact with cells non-specifically.

### Storage Condition

Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.

### Precautions Note

This product is for research use only and is not intended for therapeutic or diagnostic applications.

## Anti-Human IL-1 alpha (RABBIT) Antibody - Protein Information

**Name** IL1A

**Synonyms** IL1F1

### Function

Cytokine constitutively present intracellularly in nearly all resting non-hematopoietic cells that plays an important role in inflammation and bridges the innate and adaptive immune systems (PubMed:<a href="http://www.uniprot.org/citations/26439902" target="\_blank">26439902</a>). After binding to its receptor IL1R1 together with its accessory protein IL1RAP, forms the high affinity interleukin-1 receptor complex (PubMed:<a href="http://www.uniprot.org/citations/17507369" target="\_blank">17507369</a>, PubMed:<a href="http://www.uniprot.org/citations/2950091" target="\_blank">2950091</a>). Signaling involves the recruitment of adapter molecules such as MYD88, IRAK1 or IRAK4 (PubMed:<a href="http://www.uniprot.org/citations/17507369" target="\_blank">17507369</a>). In turn, mediates the activation of NF-kappa-B and the three MAPK pathways p38, p42/p44 and JNK pathways (PubMed:<a href="http://www.uniprot.org/citations/14687581" target="\_blank">14687581</a>). Within the cell, acts as an alarmin and cell death results in its liberation in the extracellular space after disruption of the cell membrane to induce inflammation and alert the host to injury or damage (PubMed:<a href="http://www.uniprot.org/citations/15679580" target="\_blank">15679580</a>). In addition to its role as a danger signal, which occurs when the cytokine is passively released by cell necrosis, directly senses DNA damage and acts as a signal for genotoxic stress without loss of cell integrity (PubMed:<a href="http://www.uniprot.org/citations/26439902" target="\_blank">26439902</a>).

### Cellular Location

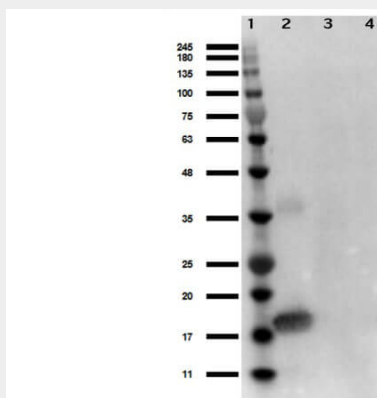
Nucleus. Cytoplasm. Secreted Note=The lack of a specific hydrophobic segment in the precursor sequence suggests that IL-1 is released by damaged cells or is secreted by a mechanism differing from that used for other secretory proteins The secretion is dependent on protein unfolding and facilitated by the cargo receptor TMED10; it results in protein translocation from the cytoplasm into the ERGIC (endoplasmic reticulum-Golgi intermediate compartment) followed by vesicle entry and secretion (PubMed:32272059) Recruited to DNA damage sites and secreted after genotoxic stress

## Anti-Human IL-1 alpha (RABBIT) 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](#)

#### **Anti-Human IL-1 alpha (RABBIT) Antibody - Images**



Western Blot of Rabbit Anti-Human IL-1 alpha Antibody. Lane 1: Opal Prestained Molecular Weight Ladder (p/n MB-210-0500). Lane 2: IL-1 alpha [50ng]. Lane 3: MEF WC lysate [10ng] (p/n W10-001-371). Lane 4: MEF LPS stimulated [10ng]. Blocking: BlockOut Buffer (p/n MB-073) for 30min at RT. Primary Antibody: Anti-IL-1a at 1 µg/mL overnight at 4°C. Secondary Antibody: Goat anti-Rabbit HRP (p/n 611-103-122) at 1:70, 000 for 30min at RT.

#### **Anti-Human IL-1 alpha (RABBIT) Antibody - Background**

Interleukin 1 alpha is produced by activated macrophages. Anti-IL-1 alpha antibody is ideal for investigators involved in Immunology research.