# IL1 beta Antibody [clone BII-9] (RQ5070)

| Catalog No. | Formulation | Size |
|---|---|---|
| RQ5070 | Antibody in PBS with 0.02% sodium azide, 50% glycerol and 0.4-0.5mg/ml BSA | 100 ul |

Recombinant RABBIT MONOCLONAL

**Bulk quote request**

| | |
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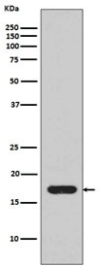
| **Availability** | 1-2 weeks |
| **Species Reactivity** | Human |
| **Format** | Purified |
| **Clonality** | Recombinant Rabbit Monoclonal |
| **Isotype** | Rabbit IgG |
| **Clone Name** | BII-9 |
| **Purity** | Affinity purified |
| **UniProt** | P01584 |
| **Applications** | Western Blot : 1:500 |
| **Limitations** | This IL1 beta antibody is available for research use only. |




Western blot testing of recombinant human IL1 beta partial protein with IL1B antibody.

## Description

IL1 beta antibody is an important reagent for studying inflammation, immune signaling, and disease mechanisms. The encoded protein, IL1b, is a proinflammatory cytokine produced mainly by activated macrophages, monocytes, and dendritic cells. IL1b is synthesized as an inactive precursor that requires cleavage by caspase 1 within the inflammasome complex to become biologically active. Once secreted, it binds to the interleukin 1 receptor type I, initiating signaling cascades that drive fever, inflammation, and host defense responses.

IL1b plays a central role in both innate and adaptive immunity. It promotes the recruitment of immune cells to sites of

infection or injury and stimulates production of additional proinflammatory mediators such as tumor necrosis factor alpha and interleukin 6. By activating NF kappa B and MAP kinase pathways, IL1b induces transcriptional programs that control cell survival, proliferation, and differentiation. This cytokine also influences adaptive immunity by supporting T helper cell polarization and antibody production.

Aberrant IL1b activity is implicated in many chronic diseases. Overproduction is associated with rheumatoid arthritis, inflammatory bowel disease, psoriasis, and gout. Elevated IL1b levels are also linked to cardiovascular disease, type 2 diabetes, and neurodegenerative disorders, where sustained inflammation drives tissue damage. Because of this pathogenic role, IL1b has become a major therapeutic target, and several clinical inhibitors have been developed to block its activity in inflammatory conditions.

At the molecular level, IL1b signaling occurs through binding to interleukin 1 receptor type I, which recruits the accessory protein IL1RAcP to form a functional receptor complex. This complex activates adaptors such as MyD88 and kinases like IRAK, leading to transcriptional activation via NF kappa B and AP 1. Through these mechanisms, IL1b amplifies proinflammatory gene expression and coordinates immune responses.

The IL1 beta antibody is widely applied in western blotting, immunohistochemistry, immunofluorescence, and flow cytometry to detect both precursor and mature protein forms. These approaches are essential for studies of inflammasome activation, cytokine regulation, and inflammatory disease models. For scientists investigating innate immunity, chronic inflammation, or targeted therapeutics, the IL1 beta antibody provides a specific and reliable detection tool. NSJ Bioreagents supplies validated antibodies that ensure accuracy and reproducibility for advanced molecular research.

## Application Notes

Optimal dilution of the IL1 beta antibody should be determined by the researcher.

## Immunogen

A synthetic peptide specific to human IL1 beta / IL1B was used as the immunogen for the IL1 beta antibody.

## Storage

Store the IL1 beta antibody at -20oC.