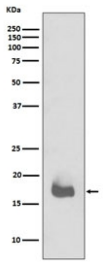
IL1B Antibody / IL1 beta [clone IBF-9] (RQ4973)

Catalog No.	Formulation	Size
RQ4973	Antibody in PBS with 0.02% sodium azide, 50% glycerol and 0.4-0.5mg/ml BSA	100 ul

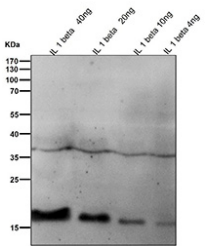
Recombinant RABBIT MONOCLONAL

Bulk quote request

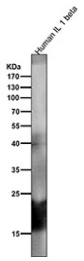
Availability	1-2 weeks
Species Reactivity	Human
Format	Purified
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	IBF-9
Purity	Affinity purified
UniProt	P01584
Applications	Western Blot : 1:500
Limitations	This IL1B antibody is available for research use only.



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



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



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

Description

IL1B antibody is a widely used reagent for investigating inflammation, immune signaling, and disease biology. The encoded protein, interleukin 1 beta, is a proinflammatory cytokine produced mainly by activated macrophages, monocytes, and dendritic cells. Interleukin 1 beta is first synthesized as an inactive precursor that must be cleaved by caspase 1 within the inflammasome complex to become biologically active. Once released, it binds to the interleukin 1 receptor type I, initiating signaling cascades that drive inflammation, fever, and host defense.

Interleukin 1 beta plays a central role in both innate and adaptive immunity. It promotes the recruitment of immune cells to sites of infection or injury and enhances the production of other proinflammatory mediators including tumor necrosis factor alpha and interleukin 6. By activating NF kappa B and MAP kinase pathways, interleukin 1 beta induces gene expression programs that regulate cell survival, differentiation, and effector function. This cytokine also shapes adaptive responses by influencing T helper cell differentiation and antibody production.

Dysregulated interleukin 1 beta signaling is associated with many diseases. Overproduction contributes to chronic inflammatory disorders such as rheumatoid arthritis, inflammatory bowel disease, psoriasis, and gout. Elevated levels are also observed in cardiovascular disease, type 2 diabetes, and neurodegenerative conditions, where persistent inflammation worsens tissue damage. Because of its pathogenic role, interleukin 1 beta has become a therapeutic target, with inhibitors such as anakinra and canakinumab developed to block its signaling in clinical settings.

At the molecular level, interleukin 1 beta functions through binding to interleukin 1 receptor type I, which recruits the interleukin 1 receptor accessory protein to form a signaling complex. This complex activates intracellular adaptors such as MyD88 and kinases including IRAK, culminating in activation of NF kappa B and AP 1 transcription factors. These events coordinate transcription of numerous proinflammatory genes, amplifying immune responses.

The IL1B antibody is widely applied in western blotting, immunohistochemistry, immunofluorescence, and flow cytometry to detect both precursor and mature forms of interleukin 1 beta. These applications support research into inflammasome activation, cytokine regulation, and inflammatory disease mechanisms. For scientists studying innate immunity, chronic inflammation, or therapeutic interventions, the IL1B antibody provides a reliable detection tool. NSJ Bioreagents offers validated antibodies that ensure reproducibility and accuracy in advanced molecular studies.

Application Notes

Optimal dilution of the IL1B antibody should be determined by the researcher.

Immunogen

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

Storage

Store the IL1B antibody at -20oC.