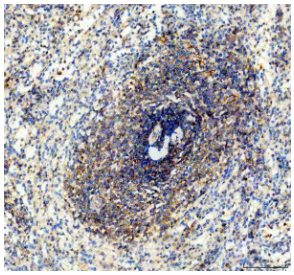
MIP1 Beta Antibody / CCL4 Polyclonal Antibody (R31955)

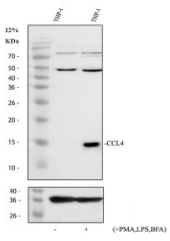
Catalog No.	Formulation	Size
R31955	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

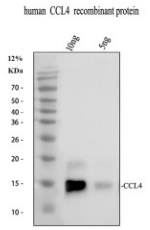
Species Reactivity	Human
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	P13236
Applications	Western blot: 0.1-0.5ug/ml Immunohistochemistry (FFPE): 2-5ug/ml ELISA: 0.1-0.5ug/ml (human protein tested); request BSA-free format for coating
Limitations	This MIP1 Beta Antibody / CCL4 Polyclonal Antibody is available for research use only.



MIP1 Beta Antibody by IHC in human spleen. Immunohistochemistry of FFPE human spleen tissue using MIP1 Beta Antibody at 2 ug/ml. Brown DAB immunoreactivity is observed among cells within the splenic lymphoid tissue, with hematoxylin counterstaining highlighting nuclei and tissue architecture. Heat-induced epitope retrieval was performed using EDTA buffer, pH 8.0, followed by overnight primary antibody incubation at 4oC. This CCL4 Polyclonal Antibody recognizes an inflammatory chemokine involved in leukocyte recruitment and immune cell signaling.



MIP1 Beta Antibody by WB in untreated and stimulated THP-1 cells. Western blot analysis of untreated and PMA/LPS/brefeldin A-stimulated human THP-1 cell lysates using MIP1 Beta Antibody. An immunoreactive band near 15 kDa is prominent in the stimulated sample and weak or undetectable in the untreated sample, consistent with increased CCL4-associated signal following inflammatory stimulation. Additional higher-molecular-weight immunoreactivity is present in both samples. This CCL4 Polyclonal Antibody targets a chemokine involved in macrophage activation and inflammatory signaling.



MIP1 Beta Antibody by WB with recombinant human CCL4. Western blot analysis of recombinant human CCL4 using MIP1 Beta Antibody. Lane 1 contains 10 ng recombinant protein, and lane 2 contains 5 ng. Immunoreactive bands are observed near 15 kDa, with stronger signal in the higher-loading lane. The observed migration is above the approximately 8 kDa molecular weight of mature CCL4 and may reflect characteristics of the recombinant protein preparation or electrophoretic migration. This CCL4 Polyclonal Antibody recognizes a chemokine involved in immune cell recruitment and inflammatory responses.

Description

MIP1 Beta Antibody recognizes macrophage inflammatory protein 1 beta (MIP1 beta), also known as C-C motif chemokine ligand 4 (CCL4). This small secreted signaling protein belongs to the CC chemokine family and participates in inflammatory responses, immune cell recruitment, and communication between leukocytes. CCL4 is produced by activated macrophages, T lymphocytes, natural killer cells, and other immune populations in response to inflammatory stimuli. Its principal function is to attract and regulate immune cells at sites of infection, tissue injury, and inflammation. The CCL4 Polyclonal Antibody targets a chemokine involved in coordinating innate and adaptive immune responses.

The human CCL4 gene is located on chromosome 17q12 and encodes a precursor protein of approximately 92 amino acids. Following removal of its signal peptide, the mature secreted chemokine contains approximately 69 amino acids and has a molecular weight near 8 kDa. CCL4 contains conserved cysteine residues characteristic of the CC chemokine family, which contribute to its three-dimensional structure. The protein is closely related to CCL3, also known as MIP1 alpha, and both chemokines participate in inflammatory cell recruitment. Despite their structural similarities, differences in receptor interactions and expression patterns contribute to their distinct biological activities.

CCL4 signals primarily through the G protein-coupled receptor CCR5, promoting chemotaxis and cellular responses associated with inflammation. CCR5 is expressed by several leukocyte populations, including subsets of T cells, macrophages, and dendritic cells. Binding of CCL4 to CCR5 activates intracellular signaling pathways that influence cell migration, cytoskeletal organization, and immune cell positioning. CCL4 is also one of the endogenous chemokines capable of competing with HIV-1 for CCR5 binding, making it relevant to investigations of viral entry and host immune defense.

CCL4 expression is regulated by inflammatory signaling pathways and can increase following immune cell activation. Elevated CCL4 production has been associated with chronic inflammation, autoimmune disorders, infectious diseases, and tumor-associated immune responses. Within the tumor microenvironment, CCL4 can influence the recruitment and distribution of immune cells, although its biological effects depend on the cellular context and local signaling environment. The CCL4 Polyclonal Antibody is relevant to research examining chemokine expression, inflammatory signaling, and leukocyte trafficking.

Research involving CCL4 contributes to understanding macrophage activation, immune cell migration, cytokine networks, and inflammatory disease mechanisms. Its interactions with CCR5 also make it an important subject in studies of antiviral immunity and immune regulation. NSJ Bioreagents offers antibodies targeting chemokines and other mediators of immune signaling. A MIP1 Beta Antibody provides a research tool for examining CCL4 expression and its role in inflammatory responses, leukocyte recruitment, and immune cell communication.

Researchers seeking broader information on CCL4 biology, chemokine signaling and immune cell recruitment are encouraged to explore our CCL4 Antibody / Macrophage Inflammatory Protein 1 Beta Antibody page.

Application Notes

Optimal dilution of the MIP1 Beta Antibody / CCL4 Polyclonal Antibody should be determined by the researcher.

Immunogen

Amino acids 24-92 of human CCL4 were used as the immunogen for the MIP1 Beta Antibody.

Storage

After reconstitution, the MIP1 Beta Antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

Alternate Names

Macrophage Inflammatory Protein 1 Beta antibody, MIP-1B antibody, CCL4 antibody, MIP1 Beta antibody, Macrophage Inflammatory Protein 1B antibody, Chemokine C-C Motif Ligand 4 antibody

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