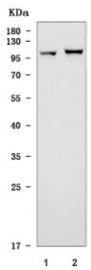
Toll-Like Receptor 5 Antibody / TLR5 Antibody (RQ7413)

Catalog No.	Formulation	Size
RQ7413	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

Availability	1-3 business days
Species Reactivity	Mouse, Rat
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity purified
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	Q9JLF7
Applications	Western blot: 0.5-1ug/ml Direct ELISA: 0.1-0.5ug/ml
Limitations	This Toll-Like Receptor 5 Antibody / TLR5 Antibody is available for research use only.



Toll-Like Receptor 5 Antibody Mouse and Rat Brain WB. Western blot analysis of rat and mouse brain tissue lysates using Toll-Like Receptor 5 Antibody. Lane 1: rat brain. Lane 2: mouse brain. A distinct immunoreactive band is detected at approximately 98 kDa in both samples, consistent with the expected molecular weight of TLR5. These results demonstrate that this Toll-Like Receptor 5 Antibody, a TLR5 Antibody, specifically detects endogenous TLR5 in rodent brain tissue and is suitable for Western blot analysis.

Description

Toll-Like Receptor 5 Antibody / TLR5 Antibody recognizes Toll-Like Receptor 5 (TLR5), a member of the Toll-like receptor family that functions as a pattern recognition receptor within the innate immune system. TLR5 is best known for recognizing bacterial flagellin, allowing epithelial and immune cells to rapidly detect motile bacteria and initiate protective inflammatory responses. The receptor is expressed on epithelial cells lining mucosal surfaces as well as monocytes, macrophages, dendritic cells, and other leukocyte populations. Because of its central role in microbial recognition, a Toll-Like Receptor 5 Antibody is widely used to investigate innate immunity, host defense, and inflammatory signaling

pathways.

Upon activation by flagellin, TLR5 recruits the adaptor protein MYD88 and initiates intracellular signaling cascades that activate nuclear factor kappa B and mitogen-activated protein kinases. These signaling events stimulate production of pro-inflammatory cytokines, chemokines, and antimicrobial mediators that coordinate recruitment of additional immune cells to sites of infection. TLR5 is particularly important within the gastrointestinal and respiratory epithelium, where continual exposure to microbial products requires rapid but tightly controlled immune responses. Consequently, a Toll-Like Receptor 5 Antibody is frequently employed to study epithelial immunity, mucosal defense, bacterial sensing, and regulation of inflammatory responses.

TLR5 has been implicated in a broad range of human diseases, including inflammatory bowel disease, respiratory inflammation, bacterial infection, autoimmune disorders, metabolic disease, and cancer. Naturally occurring polymorphisms within the TLR5 gene can alter receptor signaling and influence susceptibility to infection and chronic inflammatory conditions. In addition, pharmacologic activation of TLR5 is being explored as a strategy to enhance vaccine responses and stimulate anti-tumor immunity through activation of innate immune pathways. These expanding areas of investigation have established TLR5 as an important research target in immunology, microbiology, oncology, and translational medicine. A Toll-Like Receptor 5 Antibody supports studies examining receptor regulation, signaling activity, and immune cell function across diverse biological systems.

TLR5 is routinely evaluated by Western blot, immunohistochemistry, immunofluorescence, flow cytometry, and immunoprecipitation to characterize protein expression, subcellular localization, and receptor biology. These complementary applications enable researchers to examine TLR5 expression in cultured cells, normal tissues, and disease models while investigating mechanisms of bacterial recognition and innate immune activation. NSJ Bioreagents provides carefully validated antibodies to support these applications across multiple experimental systems. A Toll-Like Receptor 5 Antibody / TLR5 Antibody is a valuable research reagent for investigating pattern recognition receptors, bacterial flagellin sensing, innate immune signaling, mucosal immunity, and the molecular mechanisms that coordinate host defense.

Visit our TLR5 Antibody / Flagellin Receptor Antibody page to explore additional validated antibodies and research tools for investigating TLR5 expression, bacterial flagellin recognition, innate immune signaling, epithelial host defense, and inflammatory responses.

Application Notes

Optimal dilution of the Toll-Like Receptor 5 Antibody / TLR5 Antibody should be determined by the researcher.

Immunogen

E. coli-derived recombinant mouse protein (amino acids Q81-D766) was used as the immunogen for the Toll-Like Receptor 5 antibody.

Storage

After reconstitution, the Toll-Like Receptor 5 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

Toll-Like Receptor 5 antibody, TLR5 antibody, Flagellin Receptor antibody, CD285 antibody, FLR antibody

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