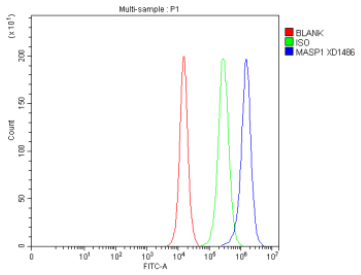
MASP1 Antibody / Mannan-binding lectin serine protease 1 (FY12231)

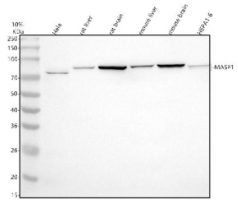
Catalog No.	Formulation	Size
FY12231	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

Availability	1-2 days
Species Reactivity	Human, Mouse, Rat
Format	Lyophilized
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Immunogen affinity purified
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
UniProt	P48740
Applications	Western Blot: 0.25-0.5ug/ml Flow cytometry: 1-3ug/million cells ELISA: 0.1-0.5ug/ml
Limitations	This MASP1 antibody is available for research use only.



Flow Cytometry analysis of PC-3 cells using anti-MASP1 antibody. Overlay histogram showing PC-3 cells stained with (Blue line). The cells were fixed with 4% paraformaldehyde and blocked with 10% normal goat serum. And then incubated with rabbit anti-MASP1 antibody (1 ug/million cells) for 30 min at 20oC. DyLight 488 conjugated goat anti-rabbit IgG (5-10 ug/million cells) was used as secondary antibody for 30 minutes at 20oC. Isotype control antibody (Green line) was rabbit IgG (1 ug/million cells) used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.



Western blot analysis of MASP1 using anti-MASP1 antibody. Electrophoresis was performed on a 10% SDS-PAGE gel at 80V (Stacking gel) / 120V (Resolving gel) for 2 hours. Lane 1: human Hela whole cell lysates, Lane 2: rat liver tissue lysates, Lane 3: rat brain tissue lysates, Lane 4: mouse liver tissue lysates, Lane 5: mouse brain tissue lysates, Lane 6: mouse HEPA1-6 whole cell lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-MASP1 antibody at 0.5 ug/ml overnight at 4oC, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal was developed using an ECL Plus Western Blotting Substrate. A specific band was detected for MASP1 at approximately 79 kDa. The expected band size for MASP1 is at 79 kDa.

Description

MASP1 antibody detects Mannan-binding lectin serine protease 1, encoded by the MASP1 gene on chromosome 3q27.3. MASP1 antibody is commonly used in research on innate immunity, complement activation, and infection biology. MASP1 is a serine protease that associates with mannan-binding lectin (MBL) and ficolins in the lectin pathway of the complement system. It initiates proteolytic cascades leading to opsonization, inflammation, and pathogen clearance. MASP1 is expressed in the liver and circulates in plasma as part of MBL-associated complexes.

Structurally, MASP1 is a ~110 kDa protein composed of CUB domains, EGF-like domains, complement control protein (CCP) repeats, and a C-terminal serine protease domain. Alternative splicing produces multiple isoforms, including MASP1 and MASP3, with distinct activities. These isoforms diversify complement activation roles and are essential for fine-tuning immune responses.

Functionally, MASP1 cleaves complement components C4 and C2, generating C3 convertase in the lectin pathway. It also activates coagulation factors, linking complement with clotting. MASP1 participates in host defense by enhancing pathogen recognition and clearance. Beyond immunity, MASP1 influences angiogenesis and tissue repair. Researchers use MASP1 antibody to study complement activation, innate defense, and coagulation biology.

Clinically, MASP1 variants are associated with susceptibility to infections and inflammatory diseases. Deficiency impairs lectin pathway activation, increasing risk of bacterial and viral infections. Conversely, overactivation of MASP1 contributes to autoimmune diseases, sepsis, and ischemia-reperfusion injury. Mutations in MASP1 are linked to 3MC syndrome, a developmental disorder with craniofacial anomalies and growth defects. As complement therapeutics are developed, MASP1 is an emerging target for intervention. NSJ Bioreagents provides MASP1 antibody for complement biology, infectious disease, and immunology research.

Experimentally, MASP1 antibody is applied in western blotting to detect the ~110 kDa protein, in ELISA to measure plasma levels, and in immunohistochemistry to examine tissue expression. Co-immunoprecipitation with MASP1 antibody identifies binding partners within MBL-associated complexes.

Application Notes

Optimal dilution of the MASP1 antibody should be determined by the researcher.

Immunogen

E.coli-derived human MASP1 recombinant protein (Position: R169-E580) was used as the immunogen for the MASP1 antibody.

Storage

After reconstitution, the MASP1 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at

-20oC. Avoid repeated freezing and thawing.

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