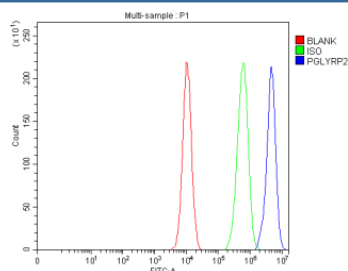


PGLYRP2 Antibody / Peptidoglycan recognition protein 2 (FY12737)

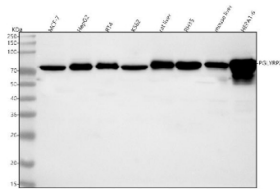
Catalog No.	Formulation	Size
FY12737	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

Availability	1-2 days
Species Reactivity	Human, Mouse, Rat
Format	Lyophilized
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 Na ₂ HPO ₄ .
UniProt	Q96PD5
Applications	Western Blot : 0.25-0.5ug/ml Flow Cytometry : 1-3ug/million cells ELISA : 0.1-0.5ug/ml
Limitations	This PGLYRP2 antibody is available for research use only.



Flow Cytometry analysis of K562 cells using anti-PGLYRP2 antibody. Overlay histogram showing K562 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-PGLYRP2 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 (Red line) was also used as a control.



Western blot analysis of PGLYRP2 using anti-PGLYRP2 antibody. Lane 1: human MCF-7 whole cell lysates, Lane 2: human HepG2 whole cell lysates, Lane 3: human RT4 whole cell lysates, Lane 4: human K562 whole cell lysates, Lane 5: rat liver tissue lysates, Lane 6: rat RH-35 whole cell lysates, Lane 7: mouse liver tissue lysates, Lane 8: 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-PGLYRP2 antibody at 0.25 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 enhanced chemiluminescent. A predominant band is observed just above ~70 kDa, consistent with glycosylated, secreted PGLYRP2 migrating above its ~62 kDa calculated mass; minor lower species likely represent less-glycosylated or processed forms.

Description

PGLYRP2 antibody detects N-acetylmuramoyl-L-alanine amidase (also known as Peptidoglycan recognition protein 2), a secreted pattern-recognition enzyme involved in innate immunity. Encoded by the PGLYRP2 gene on chromosome 19q13.12, this protein belongs to the peptidoglycan recognition protein (PGRP) family, which binds and hydrolyzes bacterial peptidoglycan to modulate immune responses. PGLYRP2 contains a conserved amidase domain that cleaves the lactylamide bond between N-acetylmuramic acid and L-alanine in bacterial cell walls, leading to peptidoglycan degradation and reduced inflammatory potential. It acts as a first-line defense mechanism in epithelial barriers such as the liver and intestinal mucosa.

PGLYRP2 is secreted primarily by the liver into the bloodstream, where it functions as a circulating peptidoglycan hydrolase. It neutralizes proinflammatory bacterial components, preventing systemic immune activation. In the gut, PGLYRP2 maintains microbiota balance by degrading bacterial fragments that would otherwise trigger toll-like receptor signaling. Genetic studies have associated PGLYRP2 variants with inflammatory bowel disease and asthma, highlighting its role in mucosal immune tolerance. The protein's enzymatic activity also protects against bacterial sepsis by reducing peptidoglycan-induced cytokine production.

The PGLYRP2 antibody is widely used in immunology, microbiology, and liver biology research to study antimicrobial defense and immune modulation. Western blot analysis typically identifies a 62 kilodalton band corresponding to full-length PGLYRP2, while immunohistochemistry reveals cytoplasmic and secretory vesicle localization in hepatocytes and epithelial cells. This antibody supports characterization of innate immune pathways and microbiota interactions. Dysregulation of PGLYRP2 expression can lead to excessive inflammation or increased bacterial susceptibility.

Mechanistically, PGLYRP2 differs from other PGRPs by possessing amidase enzymatic activity rather than bactericidal or signaling roles. It cooperates with PGLYRP1, PGLYRP3, and PGLYRP4 in forming an integrated host defense network. NSJ Bioreagents provides the PGLYRP2 antibody validated for its applications, ensuring reliable detection in studies of innate immunity, microbial recognition, and liver defense mechanisms.

Application Notes

Optimal dilution of the PGLYRP2 antibody should be determined by the researcher.

Immunogen

E.coli-derived human PGLYRP2 recombinant protein (Position: D198-Q524) was used as the immunogen for the PGLYRP2 antibody.

Storage

After reconstitution, the PGLYRP2 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

