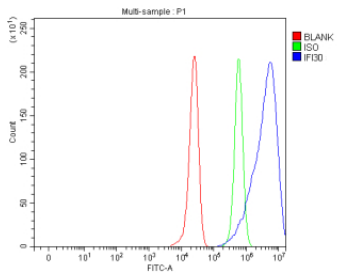
IFI30 Antibody / GILT / Gamma-interferon-inducible lysosomal thiol reductase (FY13101)

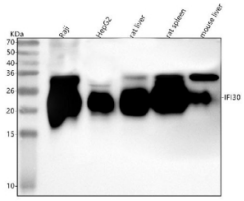
Catalog No.	Formulation	Size
FY13101	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

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	P13284
Applications	Western Blot : 0.25-0.5ug/ml Flow Cytometry : 1-3ug/million cells ELISA : 0.1-0.5ug/ml
Limitations	This IFI30 antibody is available for research use only.



Flow Cytometry analysis of HepG2 cells using anti-IFI30 antibody. Overlay histogram showing HepG2 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-IFI30 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 IFI30 using anti-IFI30 antibody. Lane 1: human Raji whole cell lysates, Lane 2: human HepG2 whole cell lysates, Lane 3: rat liver tissue lysates, Lane 4: rat spleen tissue lysates, Lane 5: mouse liver tissue 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-IFI30 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. IFI30 antibody detects a predominant band at ~23 kDa with a minor band at ~30 kDa across the indicated lysates. IFI30 is synthesized as a ~35 kDa glycoprotein and processed in the endo-lysosomal pathway to a mature form typically near ~28-30 kDa; additional C-terminal trimming and glycosylation differences can yield a smaller ~23-24 kDa species. The observed pattern is consistent with mature IFI30 predominating alongside a minor precursor or intermediate.

Description

IFI30 antibody detects Gamma-interferon-inducible lysosomal thiol reductase, an enzyme that catalyzes the reduction of disulfide bonds in endosomal and lysosomal compartments. The UniProt recommended name is Gamma-interferon-inducible lysosomal thiol reductase (IFI30). This enzyme facilitates antigen processing by reducing disulfide-linked epitopes within endosomes, promoting peptide loading onto MHC class II molecules for immune presentation.

Functionally, IFI30 antibody identifies a 250-amino-acid glycoprotein localized to lysosomes and late endosomes. IFI30 acts in concert with gamma-interferon-induced pathways to maintain redox balance within antigen-presenting cells. Its active site cysteines participate in thiol-disulfide exchange reactions, regenerating reduced peptides that can be efficiently bound by MHC class II for recognition by CD4+ T cells.

The IFI30 gene is located on chromosome 19p13.1 and is expressed predominantly in macrophages, dendritic cells, and B lymphocytes. Its expression is upregulated by interferon-gamma signaling and inflammatory cytokines. IFI30 functions downstream of antigen uptake and proteolysis, serving as a critical component in adaptive immune activation and tolerance maintenance.

Pathologically, altered IFI30 activity has been linked to immune disorders and cancer. Overexpression can enhance antigen presentation and immune surveillance, while deficiencies impair immune responses and tolerance mechanisms. IFI30 is also explored as a marker of macrophage activation and tumor immunogenicity. Research using IFI30 antibody supports immunology, antigen processing, and redox regulation studies.

IFI30 antibody is suitable for western blotting, immunohistochemistry, and immunofluorescence to detect lysosomal enzymes and immune regulators. NSJ Bioreagents provides validated IFI30 antibody reagents for use in immunology, cell biology, and redox regulation research.

Structurally, Gamma-interferon-inducible lysosomal thiol reductase contains a thioredoxin-like domain and a signal peptide targeting it to lysosomes. The protein undergoes proteolytic maturation to its active form within acidic compartments. This antibody facilitates the study of IFI30's enzymatic and immunomodulatory roles in antigen processing and cellular redox maintenance.

Application Notes

Optimal dilution of the IFI30 antibody should be determined by the researcher.

Immunogen

E.coli-derived human IFI30 recombinant protein (Position: S27-K250) was used as the immunogen for the IFI30 antibody.

Storage

After reconstitution, the IFI30 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.