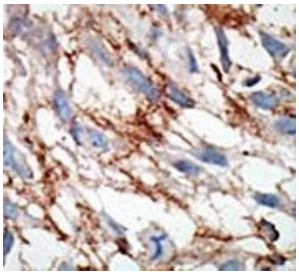
ISG15 Antibody / Interferon-Stimulated Gene 15 Polyclonal Antibody (F41498)

Catalog No.	Formulation	Size
F41498-0.4ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.4 ml
F41498-0.08ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.08 ml

Bulk quote request

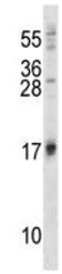
Species Reactivity	Human
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit Ig
Purity	Antigen affinity
UniProt	P05161
Localization	Cytoplasmic
Applications	IHC (Paraffin) : 1:50-1:100 Western Blot : 1:1000
Limitations	This ISG15 Antibody / Interferon-Stimulated Gene 15 Polyclonal Antibody is available for research use only.



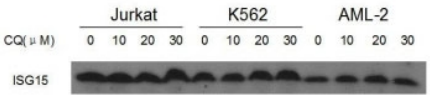
ISG15 Antibody by IHC in Human Breast Carcinoma. Immunohistochemical staining of FFPE human breast carcinoma tissue using ISG15 Antibody. Brown immunoreactivity is visible in the cytoplasm of numerous tumor cells, with blue hematoxylin nuclear counterstaining.



ISG15 Antibody by WB in Transfected 293 Cells. Western blot analysis of human 293 cell lysates using ISG15 Antibody. Lane 1: nontransfected cells; Lane 2: cells transiently transfected with the ISG15 gene. A prominent band near 15-17 kDa is detected in the transfected sample, with no corresponding band visible in the nontransfected control. Each lane contains 2 ug of lysate.



ISG15 Antibody by WB in 293 Cells. Western blot analysis of human 293 cell lysate using ISG15 Antibody. A band is detected at approximately 17 kDa, consistent with the expected molecular weight of free ISG15.



ISG15 Antibody by WB in Chloroquine-Treated Leukemia Cells. Western blot analysis of Jurkat, K562, and AML-2 cell lysates following treatment with chloroquine (CQ) at 0, 10, 20, or 30 uM for 24 hours. ISG15 immunoreactivity is detected across the treatment conditions, with differences in signal intensity between cell lines and concentrations. Image courtesy of Biyin Cao, Soochow University, Center for Blood Research.

Description

ISG15 Antibody / Interferon-Stimulated Gene 15 Polyclonal Antibody recognizes interferon-stimulated gene 15 protein, a ubiquitin-like modifier involved in innate immune defense and cellular responses to infection. Encoded by the ISG15 gene, this protein is strongly induced by type I interferons and participates in antiviral signaling through both intracellular and extracellular mechanisms. ISG15 is synthesized as a precursor that undergoes proteolytic processing to expose a C-terminal diglycine motif required for covalent attachment to cellular proteins. The mature protein contains two ubiquitin-like domains connected by a short linker region.

ISG15 conjugation, known as ISGylation, involves an enzymatic cascade resembling ubiquitination. The E1 activating enzyme UBA7 initiates the process, followed by transfer to the E2 conjugating enzyme UBE2L6. E3 ligases, including HERC5, facilitate attachment of ISG15 to selected protein substrates. The modification can influence protein interactions, localization, stability, and activity. Unlike conventional ubiquitination, ISGylation does not generally function as a direct signal for proteasomal degradation. Its biological consequences depend on the modified substrate and cellular environment.

ISG15 contributes to host defense against numerous viral pathogens. Interferon stimulation increases the availability of free ISG15 and ISGylated proteins, potentially interfering with viral replication and modifying host antiviral responses. Several viruses encode proteins that counteract ISG15-dependent defenses, illustrating its importance in host-pathogen interactions. The deISGylating enzyme USP18 removes ISG15 from conjugated proteins and also participates in regulation of type I interferon signaling through mechanisms distinct from its catalytic activity.

Human ISG15 has an additional regulatory role in stabilizing USP18, thereby helping restrain excessive interferon responses. Loss of functional ISG15 can disrupt this negative regulatory mechanism and contribute to inflammatory disease. Importantly, aspects of ISG15 biology differ between humans and mice, particularly its relationship with USP18. These differences are relevant when interpreting experimental models of interferon signaling and innate immune regulation.

Extracellular ISG15 has also been investigated as an immunomodulatory molecule capable of influencing immune cell activity and cytokine production. Its expression has been examined in infectious diseases, inflammatory conditions, and malignancies, where interferon-dependent responses can affect cellular behavior and immune surveillance. NSJ Bioreagents offers this ISG15 Antibody to support investigations of ISGylation, antiviral defense, interferon signaling, and the molecular mechanisms connecting innate immunity with cellular stress responses.

Explore our Immunology Antibodies for additional research tools targeting interferon signaling, innate immune defense, and immune regulatory pathways.

Application Notes

Titration of the ISG15 Antibody / Interferon-Stimulated Gene 15 Polyclonal Antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

A portion of amino acids 31-61 from the human protein was used as the immunogen for this ISG15 antibody.

Storage

Aliquot the ISG15 antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

Alternate Names

Interferon-stimulated gene 15 antibody, Interferon-induced 17 kDa protein antibody, Ubiquitin-like protein ISG15 antibody, Interferon-induced ubiquitin-like protein antibody

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