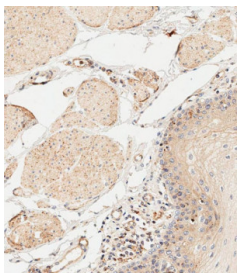
Interleukin-1 Alpha Antibody / IL1A Antibody (F49920)

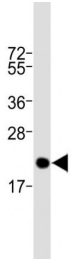
Catalog No.	Formulation	Size
F49920-0.4ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.4 ml
F49920-0.08ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.08 ml

Bulk quote request

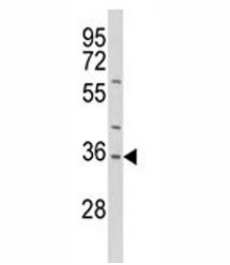
Availability	1-3 business days
Species Reactivity	Human
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit Ig
Purity	Antigen affinity
UniProt	P01583
Applications	Western Blot : 1:1000 IHC (Paraffin) : 1:50-1:100 Flow Cytometry : 1:10-1:50
Limitations	This Interleukin-1 Alpha Antibody / IL1A Antibody is available for research use only.



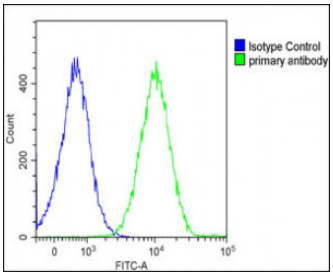
Interleukin-1 Alpha Antibody in Human Esophagus IHC. Immunohistochemistry of paraffin-embedded human esophagus tissue using Interleukin-1 Alpha Antibody at 1:500 demonstrates weak-to-moderate cytoplasmic staining in the squamous epithelium and additional staining within surrounding tissue structures, while nuclei remain predominantly counterstained blue. Testing was performed on the Leica BOND RXm with primary antibody incubation for 1 hour at room temperature. The staining demonstrates detection of interleukin 1 alpha by this IL1A Antibody in human esophagus tissue.



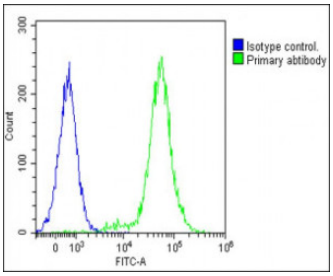
Interleukin-1 Alpha Antibody Detects Recombinant Human IL1A WB. Western blot analysis of 20 ng recombinant human IL-1 alpha protein using Interleukin-1 Alpha Antibody at 1:2000 detects a strong, discrete band at approximately 21-22 kDa with minimal background. The observed band represents the recombinant IL1A preparation used in this assay and demonstrates direct recognition of human interleukin 1 alpha by this IL1A Antibody under Western blot conditions.



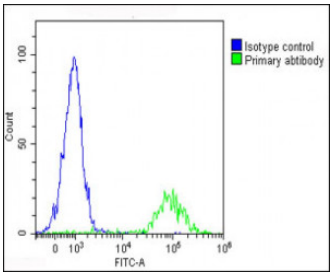
Interleukin-1 Alpha Antibody Detects IL1A in HepG2 Cells WB. Western blot analysis of human HepG2 cell lysate using Interleukin-1 Alpha Antibody detects a distinct band at approximately 34-36 kDa, close to the expected size of the approximately 31 kDa IL1A precursor. The figure does not show a prominent band corresponding to the approximately 17 kDa mature cytokine. This IL1A Antibody therefore primarily detects a species consistent with precursor IL1A under the conditions shown.



Interleukin-1 Alpha Antibody Detects IL1A in Ramos B Cells FACS. Flow cytometry analysis of fixed and permeabilized human Ramos B cells using Interleukin-1 Alpha Antibody at 1:25 demonstrates a strong rightward fluorescence shift in the antibody-stained population (green) relative to the rabbit IgG1 isotype control (blue). Cells were fixed with 2% paraformaldehyde, permeabilized with 90% methanol for 10 min, blocked with 2% BSA, and incubated with primary antibody for 60 min at 37oC. DyLight 488-conjugated goat anti-rabbit IgG at 1:200 was used for detection. The clear separation of the populations demonstrates intracellular IL1A detection by this IL1A Antibody.



Interleukin-1 Alpha Antibody Detects IL1A in Jurkat T Cells FACS. Flow cytometry analysis of fixed and permeabilized human Jurkat T cells using Interleukin-1 Alpha Antibody at 1:25 demonstrates a strong rightward fluorescence shift in the antibody-stained population (green) relative to the rabbit IgG1 isotype control (blue), with minimal overlap between the populations. Cells were fixed with 2% paraformaldehyde, permeabilized with 90% methanol for 10 min, blocked with 2% BSA, and incubated with primary antibody for 60 min at 37oC. DyLight 488-conjugated goat anti-rabbit IgG at 1:200 was used for detection. The pronounced separation demonstrates intracellular IL1A detection by this IL1A Antibody in Jurkat T cells.



Interleukin-1 Alpha Antibody Detects IL1A in Raji B Cells FACS. Flow cytometry analysis of fixed and permeabilized human Raji B cells using Interleukin-1 Alpha Antibody at 1:25 demonstrates a pronounced rightward fluorescence shift in the antibody-stained population (green) relative to the rabbit IgG1 isotype control (blue), with minimal overlap between the populations. Cells were fixed with 2% paraformaldehyde, permeabilized with 90% methanol for 10 min, blocked with 2% BSA, and incubated with primary antibody for 60 min at 37oC. DyLight 488-conjugated goat anti-rabbit IgG at 1:200 was used for detection. The clear population separation demonstrates intracellular IL1A detection by this IL1A Antibody in Raji B cells.

Description

Interleukin-1 Alpha Antibody recognizes interleukin 1 alpha (IL-1 alpha), a proinflammatory cytokine encoded by the IL1A gene. IL1A belongs to the interleukin 1 family of cytokines and plays an important role in coordinating innate immune and inflammatory responses. The protein is synthesized as an approximately 31 kDa precursor that is biologically active and can undergo proteolytic processing to generate a mature cytokine.

IL-1 alpha can function in several cellular contexts. The precursor protein may act intracellularly or associate with the plasma membrane, while extracellular IL-1 alpha signals through interleukin 1 receptor type 1 (IL1R1). Receptor engagement activates signaling pathways involving MyD88, IRAK proteins, NF-kappaB, and MAPKs, promoting expression of cytokines, chemokines, adhesion molecules, and other mediators of inflammation.

IL1A is particularly important as an early signal of cellular stress and tissue damage. Because biologically active IL-1 alpha can be present within cells before injury occurs, loss of membrane integrity during necrosis can expose surrounding

cells to the cytokine and initiate sterile inflammatory responses. This alarmin-like activity links IL1A to innate immunity, tissue injury, host defense, inflammatory disease, and tissue repair.

IL-1 alpha signaling has also been investigated in chronic inflammation and cancer biology. Within the tissue microenvironment, IL1A-mediated signaling can influence immune-cell recruitment, stromal responses, angiogenesis, and communication between different cell populations. These activities have made IL1A an important target for research into the connections between cellular damage, inflammatory signaling, and disease-associated tissue responses. NSJ Bioreagents supplies this antibody for research use only.

An Interleukin-1 Alpha Antibody can be used to investigate IL1A expression and molecular mechanisms involving inflammatory signaling, innate immunity, cellular stress, and tissue responses to injury.

For an additional monoclonal clone with protein microarray specificity validation, see our IL-1 alpha Antibody IL1A/3982 / Interleukin 1 Alpha Antibody page.

Application Notes

The stated application concentrations are suggested starting amounts. Titration of the Interleukin-1 Alpha Antibody / IL1A Antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

A portion of amino acids 177-206 from human IL1A was used as the immunogen for this Interleukin-1 Alpha Antibody.

Storage

Store at 4oC for up to one month. For long term, aliquot the Interleukin-1 Alpha Antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

Alternate Names

IL1A antibody, IL-1 alpha antibody, IL1 alpha antibody, IL-1A antibody, interleukin 1 alpha antibody, interleukin-1 alpha antibody, IL-1 alpha precursor antibody, IL1A precursor antibody, hematopoietin 1 antibody, IL-1F1 antibody, interleukin-1 family member 1 antibody, preinterleukin 1 alpha antibody

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