

# JAK2 Rabbit pAb

**Catalog No.: A25438**

## Basic Information

**Observed MW**

Refer to figures

**Calculated MW**

131kDa

**Category**

Primary antibody

**Applications**

ELISA, IHC-P, IF/ICC

**Cross-Reactivity**

Human, Mouse, Rat

## Background

This gene encodes a non-receptor tyrosine kinase that plays a central role in cytokine and growth factor signalling. The primary isoform of this protein has an N-terminal FERM domain that is required for erythropoietin receptor association, an SH2 domain that binds STAT transcription factors, a pseudokinase domain and a C-terminal tyrosine kinase domain. Cytokine binding induces autophosphorylation and activation of this kinase. This kinase then recruits and phosphorylates signal transducer and activator of transcription (STAT) proteins. Growth factors like TGF-beta 1 also induce phosphorylation and activation of this kinase and translocation of downstream STAT proteins to the nucleus where they influence gene transcription. Mutations in this gene are associated with numerous inflammatory diseases and malignancies. This gene is a downstream target of the pleiotropic cytokine IL6 that is produced by B cells, T cells, dendritic cells and macrophages to produce an immune response or inflammation. Disregulation of the IL6/JAK2/STAT3 signalling pathways produces increased cellular proliferation and myeloproliferative neoplasms of hematopoietic stem cells. A nonsynonymous mutation in the pseudokinase domain of this gene disrupts the domains inhibitory effect and results in constitutive tyrosine phosphorylation activity and hypersensitivity to cytokine signalling. This gene and the IL6/JAK2/STAT3 signalling pathway is a therapeutic target for the treatment of excessive inflammatory responses to viral infections. Alternative splicing results in multiple transcript variants encoding distinct isoforms.

## Recommended Dilutions

**IHC-P** 1:50 - 1:200**IF/ICC** 1:50 - 1:200

## Immunogen Information

**Gene ID**

3717

**Swiss Prot**

O60674

**Immunogen**

A synthetic peptide corresponding to a sequence within amino acids 790-890 of human JAK2 (NP\_004963.1).

**Synonyms**

JTK10; JAK2

## Contact

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## Product Information

**Source**

Rabbit

**Isotype**

IgG

**Purification**

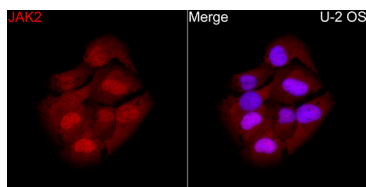
Affinity purification

**Storage**

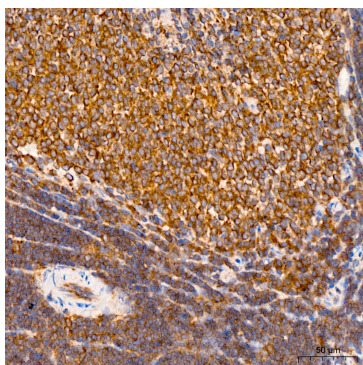
Store at -20°C. Avoid freeze / thaw cycles.

Buffer: PBS with 0.05% proclin300, 50% glycerol, pH7.3.

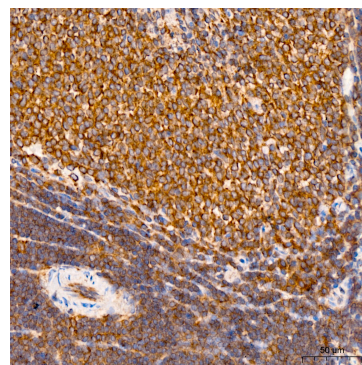
## Validation Data



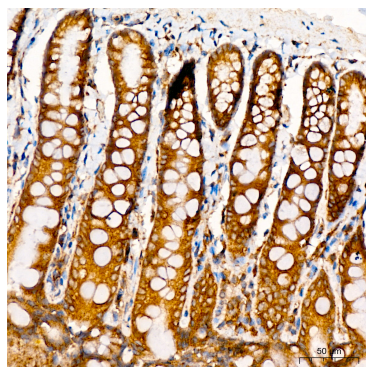
Immunofluorescence analysis of U-2 OS cells using JAK2 Rabbit pAb(A25438) at a dilution of 1:100 (40x lens). Secondary antibody: Cy3 Goat Anti-Rabbit IgG (H+L)(AS007) at 1:500 dilution. Blue: DAPI for nuclear staining.



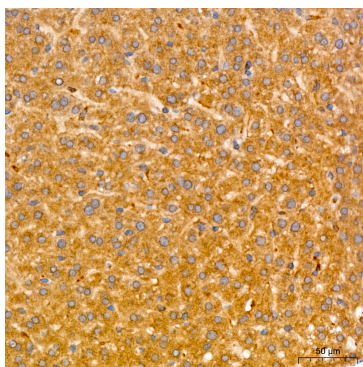
Immunohistochemistry analysis of JAK2 in paraffin-embedded rat spleen tissue using JAK2 Rabbit pAb (A25438) at a dilution of 1:100 (40x lens). High pressure antigen retrieval was performed with 0.01 M citrate buffer (pH 6.0) prior to IHC staining.



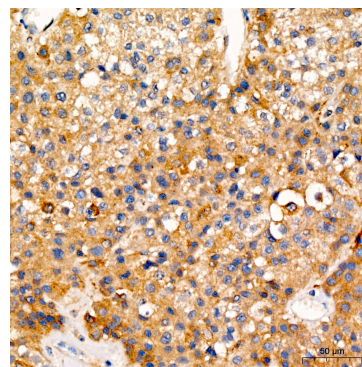
Immunohistochemistry analysis of JAK2 in paraffin-embedded rat spleen tissue using JAK2 Rabbit pAb (A25438) at a dilution of 1:100 (40x lens). High pressure antigen retrieval was performed with 0.01 M citrate buffer (pH 6.0) prior to IHC staining.



Immunohistochemistry analysis of JAK2 in paraffin-embedded rat colon tissue using JAK2 Rabbit pAb (A25438) at a dilution of 1:100 (40x lens). High pressure antigen retrieval was performed with 0.01 M citrate buffer (pH 6.0) prior to IHC staining.



Immunohistochemistry analysis of JAK2 in paraffin-embedded mouse liver tissue using JAK2 Rabbit pAb (A25438) at a dilution of 1:100 (40x lens). High pressure antigen retrieval was performed with 0.01 M citrate buffer (pH 6.0) prior to IHC staining.



Immunohistochemistry analysis of JAK2 in paraffin-embedded human liver cancer tissue using JAK2 Rabbit pAb (A25438) at a dilution of 1:100 (40x lens). High pressure antigen retrieval was performed with 0.01 M citrate buffer (pH 6.0) prior to IHC staining.