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[KO Validated] JAK2 Rabbit mAb

Catalog No.: A28566 KO Validated Recombinant

Basic Information

Observed MW
130 KDa

Calculated MW
131 KDa

Category
Primary antibody

Applications
WB,IP,IF/ICC,IHC-P,ELISA

Cross-Reactivity
Human, Mouse, Rat

CloneNo number
ARC77932

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

WB	1:2000 -1:6000
IP	0.5 µg - 4 µg antibody for 200 µg - 400 µg extracts of whole cells
IF/ICC	1:100 - 1:400
IHC-P	1:100 - 1:400
ELISA	Recommended starting concentration is 1 µg/mL. Please optimize the concentration based on your specific assay requirements. For high-ratio antibody dilutions (≥1:10000)a sequential dilution method is strongly recommended to ensure measurement accuracy.

Immunogen Information

Gene ID
3717

Swiss Prot
O60674

Immunogen
Recombinant protein (or fragment).This information is considered to be commercially sensitive.

Synonyms
JTK10

Product Information

Source
Rabbit

Isotype
IgG

Purification
Affinity purification

Storage
Store at -20℃. Avoid freeze / thaw cycles.
Buffer: PBS with 0.09% sodium azide,0.05% BSA,50% glycerol,pH7.3.

Contact

400-999-6126

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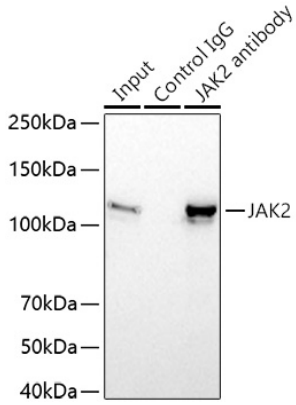
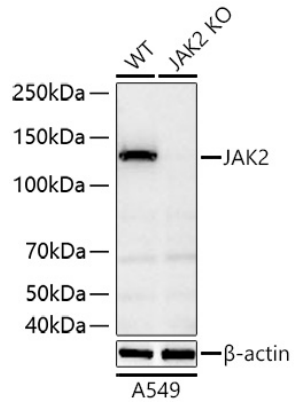
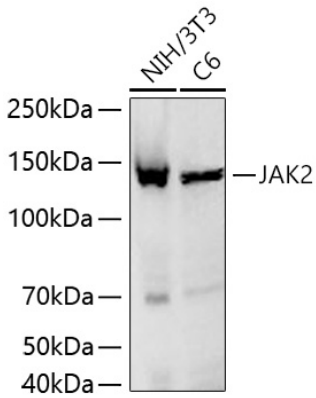
Validation Data



Immunoprecipitation of JAK2 from 200 µg extracts of HEL cells was performed using 1 µg of [KO Validated] JAK2 Rabbit mAb (A28566). Rabbit Control IgG (AC005) was used to precipitate the Control IgG sample. IP samples were eluted with 1x Laemmli Buffer. The Input lane represents 10% of the total input. Western blot analysis of immunoprecipitates was conducted using [KO Validated] JAK2 Rabbit mAb (A28566) at a dilution of 1:6000.

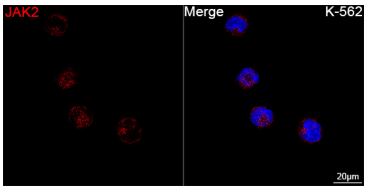


Western blot analysis of lysates from wild type (WT) and JAK2 knockout (KO) A549 cells using [KO Validated] JAK2 Rabbit mAb (A28566) at 1:6000 dilution incubated overnight at 4℃.
Secondary antibody: HRP-conjugated Goat anti-Rabbit IgG (H+L) (AS014) at 1:10000 dilution.
Lysates/proteins: 25 µg per lane.
Blocking buffer: 3% nonfat dry milk in TBST.
Detection: ECL Basic Kit (RM00020).
Exposure time: 90 s.

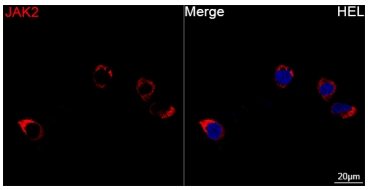


Western blot analysis of various lysates using [KO Validated] JAK2 Rabbit mAb (A28566) at 1:6000 dilution incubated overnight at 4℃.
Secondary antibody: HRP-conjugated Goat anti-Rabbit IgG (H+L) (AS014) at 1:10000 dilution.
Lysates/proteins: 25 µg per lane.
Blocking buffer: 3% nonfat dry milk in TBST.
Detection: ECL Basic Kit (RM00020).
Exposure time: 90 s.

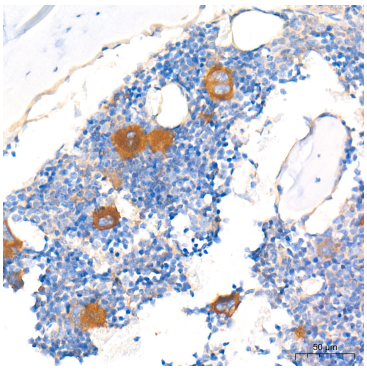
Validation Data



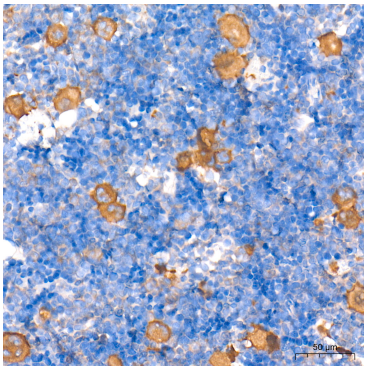
Confocal imaging of K-562 cells using [KO Validated] JAK2 Rabbit mAb (A28566, dilution 1:200) followed by a further incubation with Cy3-conjugated Goat anti-Rabbit IgG (H+L) (AS007, dilution 1:500) (Red). DAPI was used for nuclear staining (Blue). Objective: 100x.



Confocal imaging of HEL cells using [KO Validated] JAK2 Rabbit mAb (A28566, dilution 1:200) followed by a further incubation with Cy3-conjugated Goat anti-Rabbit IgG (H+L) (AS007, dilution 1:500) (Red). DAPI was used for nuclear staining (Blue). Objective: 100x.



Immunohistochemistry analysis of paraffin-embedded Mouse bone marrow tissue using [KO Validated] JAK2 Rabbit mAb (A28566) at a dilution of 1:200 (40x lens). High pressure antigen retrieval performed with 0.01M Tris-EDTA Buffer (pH 9.0) prior to IHC staining.



Immunohistochemistry analysis of paraffin-embedded Rat bone marrow tissue using [KO Validated] JAK2 Rabbit mAb (A28566) at a dilution of 1:200 (40x lens). High pressure antigen retrieval performed with 0.01M Tris-EDTA Buffer (pH 9.0) prior to IHC staining.