

AP1575

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Phospho-JAK2-Y1007/1008 Rabbit mAb

Catalog No.: AP1575

Recombinant

Basic Information

Observed MW

131kDa

Calculated MW

131kDa

Category

SMab Recombinant Monoclonal
Antibody

Applications

WB,ELISA

Cross-Reactivity

Human

Recommended Dilutions

WB 1:4000 - 1:9000

ELISA Recommended starting concentration is 1 µg/mL. Please optimize the concentration based on your specific assay requirements. For high-ratio antibody dilutions ($\geq 1:10000$), a sequential dilution method is strongly recommended to ensure measurement accuracy.

Contact



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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.

Immunogen Information

Gene ID

3717

Swiss Prot

O60674

Immunogen

Synthetic peptide. This information is considered to be commercially sensitive.

Synonyms

JTK10

Product Information

Source

Rabbit

Isotype

IgG

Purification

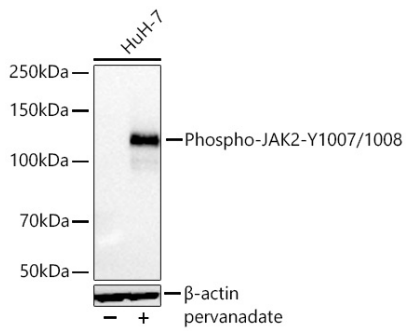
Affinity purification

Storage

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

Buffer: PBS with 0.09% Sodium azide, 0.05% BSA, 50% glycerol, pH7.3.

Validation Data



Western blot analysis of lysates from HuH-7 cells using Phospho-JAK2-Y1007/1008 Rabbit mAb (AP1575) at 1:5000 dilution incubated overnight at 4°C. HuH-7 cells were treated with Pervanadate (1 mM) at 37°C for 30 minutes after serum-starvation overnight.

Secondary antibody: HRP-conjugated Goat anti-Rabbit IgG (H+L) (AS014) at 1:10000 dilution.

Lysates/proteins: 30 µg per lane.

Blocking buffer: 3 % nonfat dry milk in TBST.

Detection: ECL Basic Kit (RM00020).

Exposure time: 5s.