Anti-Phospho-JAK2 (Tyr221) Rabbit pAb

Purified Rabbit Polyclonal Antibody

Catalog # P108224

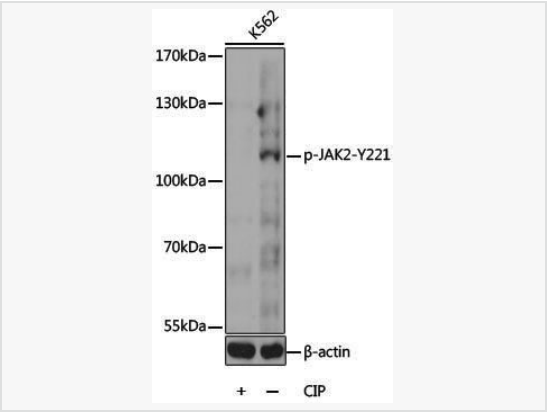
Product Information

Application	WB, ELISA
Reactivity	Human, Mouse, Rat
Dilution	WB 1:500~1:2000
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Label	Unconjugated
Immunogen	A synthetic phosphorylated peptide around Y221 of human JAK2 (NP_004963.1).
Format	Affinity purified polyclonal antibody supplied in PBS with 0.02% sodium azide and 50% glycerol, pH 7.3.
Storage	Shipped on wet ice. Store at -20°C. Stable for 24 months from date of receipt. Aliquoting is unnecessary for -20°C storage.
Precautions	Anti-Phospho-JAK2 (Tyr221) Rabbit pAb is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Synonyms	JTK10; Phospho-JAK2-Y221.
Calculated MW	Calculated MW: 131 kDa; Observed MW: 125 kDa
Uniprot ID	O60674
Gene ID	3717
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.

Validation Images



Western blot analysis of lysates from K562 cells, using Phospho-JAK2-Y221 Rabbit pAb (P108224) at 1:1,000 dilution. K562 cells were treated by CIP (20ul CIP for each 400ul cell lysate) at 37°C for 1 hour.
Secondary antibody: HRP-conjugated Goat anti-Rabbit IgG (H+L) (LF102) at 1:10,000 dilution.
Lysates/proteins: 25µg per lane.
Blocking buffer: 3% BSA.
Detection: ECL Kit.
Exposure time: 30s.