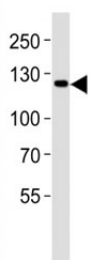


## JAK2 Antibody (F52602)

| Catalog No.   | Formulation                                | Size    |
|---------------|--------------------------------------------|---------|
| F52602-0.4ML  | In 1X PBS, pH 7.4, with 0.09% sodium azide | 0.4 ml  |
| F52602-0.08ML | In 1X PBS, pH 7.4, with 0.09% sodium azide | 0.08 ml |

[Bulk quote request](#)

|                             |                                                        |
|-----------------------------|--------------------------------------------------------|
| <b>Availability</b>         | 1-3 business days                                      |
| <b>Species Reactivity</b>   | Human                                                  |
| <b>Predicted Reactivity</b> | Mouse, Rat, Pig, Chicken                               |
| <b>Format</b>               | Antigen affinity purified                              |
| <b>Clonality</b>            | Polyclonal (rabbit origin)                             |
| <b>Isotype</b>              | Rabbit Ig                                              |
| <b>Purity</b>               | Antigen affinity                                       |
| <b>UniProt</b>              | O60674                                                 |
| <b>Applications</b>         | Western Blot : 1:1000                                  |
| <b>Limitations</b>          | This JAK2 antibody is available for research use only. |



Western blot analysis of lysate from LNCaP cell line using JAK2 antibody diluted at 1:1000. Predicted molecular weight ~130 kDa

## Description

JAK2 is a non-receptor tyrosine kinase involved in various processes such as cell growth, development, differentiation or histone modifications. Mediates essential signaling events in both innate and adaptive immunity. In the cytoplasm, plays a pivotal role in signal transduction via its association with type I receptors such as growth hormone (GHR), prolactin (PRLR), leptin (LEPR), erythropoietin (EPOR), thrombopoietin (THPO); or type II receptors including IFN-alpha, IFN-beta, IFN-gamma and multiple interleukins. Following ligand-binding to cell surface receptors, phosphorylates specific tyrosine residues on the cytoplasmic tails of the receptor, creating docking sites for STATs proteins. Subsequently, phosphorylates the STATs proteins once they are recruited to the receptor. Phosphorylated STATs then form homodimer or heterodimers

and translocate to the nucleus to activate gene transcription. For example, cell stimulation with erythropoietin (EPO) during erythropoiesis leads to JAK2 autophosphorylation, activation, and its association with erythropoietin receptor (EPOR) that becomes phosphorylated in its cytoplasmic domain. Then, STAT5 (STAT5A or STAT5B) is recruited, phosphorylated and activated by JAK2. Once activated, dimerized STAT5 translocates into the nucleus and promotes the transcription of several essential genes involved in the modulation of erythropoiesis. In addition, JAK2 mediates angiotensin-2-induced ARHGEF1 phosphorylation. Plays a role in cell cycle by phosphorylating CDKN1B. Cooperates with TEC through reciprocal phosphorylation to mediate cytokine-driven activation of FOS transcription. In the nucleus, plays a key role in chromatin by specifically mediating phosphorylation of 'Tyr-41' of histone H3 (H3Y41ph), a specific tag that promotes exclusion of CBX5 (HP1 alpha) from chromatin. [UniProt]

## Application Notes

Titration of the JAK2 antibody may be required due to differences in protocols and secondary/substrate sensitivity.

## Immunogen

This JAK2 antibody was produced from a rabbit immunized with a KLH conjugated synthetic peptide between 834-868 amino acids from the C-terminal region of human JAK2.

## Storage

Aliquot the JAK2 antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.