

## Phospho-Jak2 (Tyr570) Rabbit Polyclonal Antibody

### Catalog #: EAB10269

| Host/Isotype | Clonality  | Applications         | MW (kDa) | Reactivity        |
|--------------|------------|----------------------|----------|-------------------|
| Rabbit IgG   | Polyclonal | WB, IHC-P, IF, ELISA | 131      | Human, Mouse, Rat |

### Applications Dilutions

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

|  |              |
|--|--------------|
| <b>WB</b> (Western Blotting)                     | 1:500-2000   |
| <b>IHC-P</b> (Immunohistochemistry-Paraffin)     | 1:50-300     |
| <b>IF</b> (Immunofluorescence)                   | 1:50-300     |
| <b>ELISA</b> (Enzyme-linked Immunosorbent Assay) | 1:5000-20000 |

### Product Information

|                       |  |
|-----------------------|--|
| <b>Conjugate</b>      | Unconjugate  |
| <b>Specificity</b>    | Phospho-Jak2 (Tyr570) Rabbit Polyclonal Antibody detects endogenous levels of Jak2 protein only when phosphorylated at Tyr570.         |
| <b>Purification</b>   | Affinity purification  |
| <b>Concentration</b>  | 1mg/ml   |
| <b>Format</b>         | Liquid   |
| <b>Formulation</b>    | In PBS, pH 7.4, Containing 0.02% sodium azide, 0.5% BSA and 50% Glycerol   |
| <b>Shipping</b>       | Gel Pack   |
| <b>Storage</b>        | Store at -20°C least 1 year from the date of shipment. Avoid repeated freeze/thaw cycles. Aliquots may be stored at +4°C for 1-2 weeks |
| <b>UniProt ID</b>     | <a href="#">O60674</a>   |
| <b>Entrez-Gene Id</b> | <a href="#">3717</a>   |

### Product Description

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.

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