# Mouse (monoclonal) Anti-JAK2 Unconjugated

## PRODUCT ANALYSIS SHEET

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| **Catalog Number:** | AHO1352 |
| **Lot Number:** | See product label |
| **Quantity/Volume:** | 100 µg/0.2 mL |
| **Clone Number:** | 691R5 |
| **Isotype:** | IgG2b κ (mouse) |
| **Form of Antibody:** | Purified immunoglobulin in phosphate buffered saline, pH 7.2, with 1% bovine serum albumin. |
| **Preservation:** | 0.1% sodium azide (Caution: sodium azide is a poisonous and hazardous substance. Handle with care and dispose of properly.) |
| **Purification:** | Purified from ascites by affinity chromatography. |
| **Immunogen:** | Recombinant fragment of human JAK2 expressed in *E. coli*. |
| **Specificity:** | Janus Activating Kinase 2 (JAK2) is a 130 kDa tyrosine kinase involved in cytoplasmic signal transduction. Ligand binding to a variety of cell surface receptors (e.g., cytokine, growth factor, GPCRs) leads to an association of those receptors with JAK proteins, which are then activated via phosphorylation on tyrosines 1007 and 1008 in the kinase activation loop. Activated JAK proteins phosphorylate and activate STAT (signal transducers and activators of transcription) proteins, which then dimerize and translocate to the nucleus. Once in the nucleus, STAT proteins bind to DNA and modify the transcription of various genes, which can lead to various responses such as cell proliferation, cell survival and differentiation. |
| **Species Reactivity:** | Human, mouse and rat. |
| **Applications:** | This antibody is suitable for use in Western blotting. |
| **Suggested Working Dilutions:** | For Western blotting, the recommended concentration is 1 µg/mL. The optimal antibody concentration should be determined for each specific application. |
| **Recommended Positive Control:** | Human Jurkat cells, mouse 3T3L1 cells and rat L6 cells. |
| **Storage:** | Store at 2-8ºC. For long term storage, aliquot into small volumes and store at –20ºC. Avoid repeated freeze-thaw cycles to prevent denaturing the antibody. |



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**References:**

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Ihle, J.N. (1996) STATs: signal transducers and activators of transcription. Cell 84(3):331-334.

**Related Products:**

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| JAK1 Rabbit Polyclonal Antibody | Cat. # 44-400G |
| JAK1 [pYpY$^{1022/1023}$] Phosphorylation Site Specific Antibody | Cat. # 44-422G |
| JAK2 Rabbit Polyclonal Antibody | Cat. # 44-406G |
| JAK2 [pYpY$^{1007/1008}$] Phosphorylation Site Specific Antibody | Cat. #44-426G |
| Extracts: 3T3-L1 Adipocytes +/- LIF | Cat. # 55-160 |

--- 130 kDa

**Western Blot Analysis**

Proteins from cell extract of human Jurkat cells were resolved by SDS-PAGE and transferred to PVDF. The membranes were incubated with this JAK2 monoclonal antibody (clone 691R5) at a concentration of 1 µg/mL for two hours at room temperature. After washing, the membranes were incubated with a goat F(ab')$_2$ anti-mouse IgG alkaline phosphatase conjugated antibody (Cat. # AMI4405) at a 1:2000 dilution. Bands were detected with CDP-substrate using the WesternStar™ method (Tropix) and Kodak BioMax film.



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