

## Anti-Phospho-JAK2 (Tyr1007, 1008) Antibody (5T587)

### Product Details

Ig Type:	Rabbit IgG
Reactivity:	Human
Conjugation:	Unconjugated
Clone:	5T587
Purification:	Affinity-chromatography

### Applications

Verified Activity:	<p>1. Western Blot</p> <ul style="list-style-type: none"><li>-Positive WB detected in Hela whole cell lysate,A549 whole cell lysate(treated with Pervanadate or not)</li><li>-All lanes Phospho-JAK2 antibody at 0.75µg/ml</li><li>-Secondary: Goat polyclonal to rabbit IgG at 1/50000 dilution</li><li>-Predicted band size: 120 KDa</li><li>-Observed band size: 120 KDa</li></ul> <p>2. IHC image of TMAH-00913 diluted at 1:100 and staining in paraffin-embedded human ovarian cancer performed on a Leica Bond™ system. After dewaxing and hydration, antigen retrieval was mediated by high pressure in a citrate buffer (pH 6.0). Section was blocked with 10% normal goat serum 30min at RT. Then primary antibody (1% BSA) was incubated at 4°C overnight. The primary is detected by a biotinylated secondary antibody and visualized using an HRP conjugated SP system.</p> <p>3. IHC image of TMAH-00913 diluted at 1:100 and staining in paraffin-embedded human cervical cancer performed on a Leica Bond™ system. After dewaxing and hydration, antigen retrieval was mediated by high pressure in a citrate buffer (pH 6.0). Section was blocked with 10% normal goat serum 30min at RT. Then primary antibody (1% BSA) was incubated at 4°C overnight. The primary is detected by a biotinylated secondary antibody and visualized using an HRP conjugated SP system.</p> <p>4. Immunoprecipitating Phospho-JAK2 in Hela whole cell lysate treated with Pervanadate</p> <ul style="list-style-type: none"><li>-Lane 1: Rabbit control IgG(1µg)instead of TMAH-00913 in Hela whole cell lysate treated with Pervanadate.</li></ul> <p>For western blotting,a HRP-conjugated Protein G antibody was used as the secondary antibody (1/2000)</p> <ul style="list-style-type: none"><li>-Lane 2: TMAH-00913(3µg)+ Hela whole cell lysate treated with Pervanadate(1mg)</li><li>-Lane 3: Hela whole cell lysate treated with Pervanadate(20µg)</li></ul>
Application:	ELISA,IHC,IP,WB

## A DRUG SCREENING EXPERT

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Recommended WB:1:500-1:5000; IHC:1:50-1:200; IP:1:200-1:1000.

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### Properties

Stability & Storage: Store at -20°C or -80°C for 12 months. Avoid repeated freeze-thaw cycles.

Shipping: Shipping with blue ice.

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### Antigen Details

Immunogen: A synthetic peptide: Human Phospho-JAK2 (Y1007 + Y1008)

Antigen Species: Human

Gene ID: 3717

Uniprot ID: O60674

Synonyms: Phospho-JAK2 (Y1007, 1008);JAK2 (p-Y1007, 1008);p-JAK2 (Tyr1007, 1008);JAK2 (p-Tyr1007, 1008);p-JAK2 (Y1007, 1008)

Biology Area: Cell Biology

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### Research Background

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. Part of a signaling cascade that is activated by increased cellular retinol and that leads to the activation of STAT5 (STAT5A or STAT5B). 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.

**Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins**

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