Datasheet for ABIN7127703

Recombinant anti-JAK2 antibody (pTyr1007, pTyr1008)

4 Images

Go to Product page

Overview

Quantity:	100 µL
Target:	JAK2
Binding Specificity:	pTyr1007, pTyr1008
Reactivity:	Human
Host:	Rabbit
Antibody Type:	Recombinant Antibody
Clonality:	Monoclonal
Conjugate:	This JAK2 antibody is un-conjugated
Application:	Western Blotting (WB), ELISA, Immunohistochemistry (IHC), Immunoprecipitation (IP)

Product Details

Immunogen:	A synthesized peptide derived from human Phospho-JAK2 (Y1007 + Y1008)
Clone:	1A4
Isotype:	IgG
Cross-Reactivity:	Human
Purification:	Affinity-chromatography

Target Details

Target:	JAK2
Alternative Name:	JAK2 (JAK2 Products)

Target Details

Background:	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 (PubMed:7615558). Following ligand-binding to cell surface receptors, phosphorylates specific tyrosine residues on the cytoplasmic tails of the receptor, creating docking sites for STATs proteins (PubMed:9618263). 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) (PubMed:21368206). In addition, JAK2 mediates angiotensin-2-induced ARHGEF1 phosphorylation (PubMed:20098430). Plays a role in cell cycle by phosphorylating CDKN1B (PubMed:21423214). 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 (PubMed:19783980). Aliases: Tyrosine-protein kinase JAK2, Janus kinase 2, JAK-2, JAK2
UniProt:	O60674
Pathways:	JAK-STAT Signaling, RTK Signaling, Interferon-gamma Pathway, Positive Regulation of Peptide Hormone Secretion, Intracellular Steroid Hormone Receptor Signaling Pathway, Response to Growth Hormone Stimulus, Positive Regulation of Endopeptidase Activity, Protein targeting to Nucleus, CXCR4-mediated Signaling Events, Platelet-derived growth Factor Receptor Signaling, Unfolded Protein Response

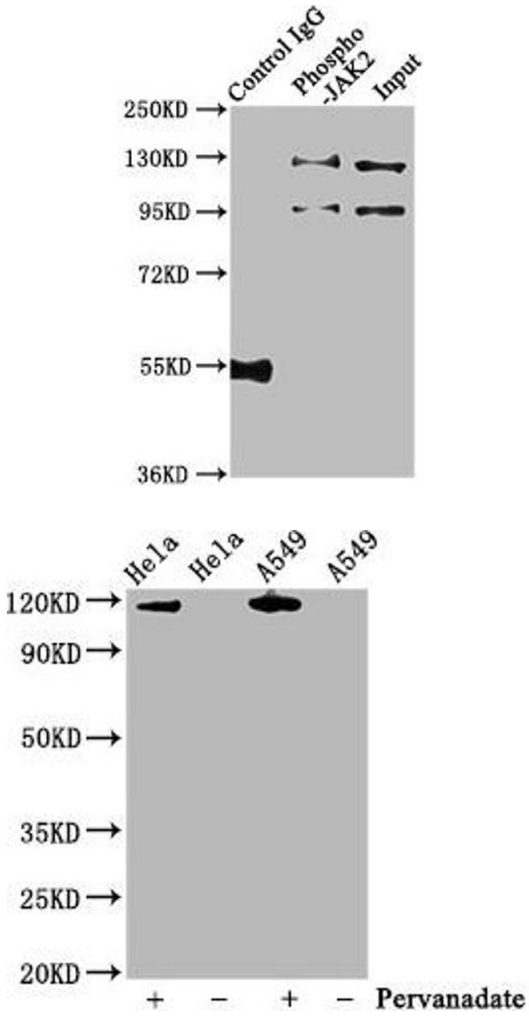
Application Details

Application Notes:	Recommended dilution: WB:1:500-1:5000, IHC:1:50-1:200, IP:1:200-1:1000,
Restrictions:	For Research Use only

Handling

Format:	Liquid
Buffer:	Rabbit IgG in phosphate buffered saline , pH 7.4, 150 mM NaCl, 0.02 % sodium azide and 50 % glycerol.
Preservative:	Sodium azide
Precaution of Use:	This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Storage:	-20 °C,-80 °C
Storage Comment:	Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.

Images

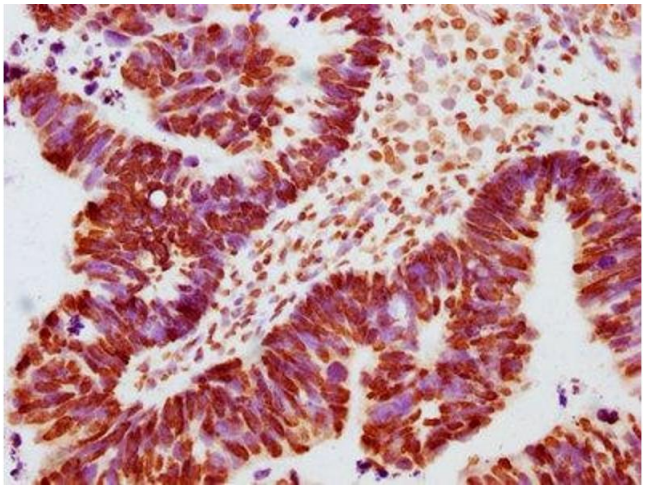


Western Blotting

Image 1. Immunoprecipitating Phospho-JAK2 in Hela whole cell lysate treated with Pervanadate Lane 1: Rabbit control IgG(1 µg)instead of ABIN7127703 in Hela whole cell lysate treated with Pervanadate. For western blotting,a HRP-conjugated Protein G antibody was used as the secondary antibody (1/2000) Lane 2: ABIN7127703(3 µg)+ Hela whole cell lysate treated with Pervanadate(1 mg) Lane 3: Hela whole cell lysate treated with Pervanadate(20 µg)

Western Blotting

Image 2. Western Blot Positive WB detected in Hela whole cell lysate,A549 whole cell lysate(treated with Pervanadate or not) All lanes Phospho-JAK2 antibody at 0.75 µg/mL Secondary Goat polyclonal to rabbit IgG at 1/50000 dilution Predicted band size: 120 KDa Observed band size: 120 KDa



Immunohistochemistry

Image 3. IHC image of ABIN7127703 diluted at 1:100 and staining in paraffin-embedded human ovarian cancer performed on a Leica BondTM 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 30 min 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.

Please check the product details page for more images. Overall 4 images are available for ABIN7127703.