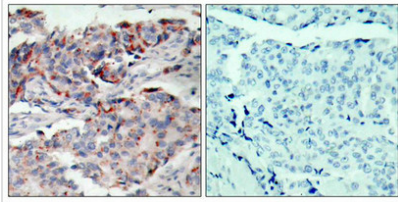




Phospho-JAK2 (Tyr221) Antibody

Product Code	CSB-PA173118
Storage	Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.
Uniprot No.	O60674
Immunogen	Peptide sequence around phosphorylation site of tyrosine 221(Q-D-Y(p)-H-I) derived from Human JAK2.
Raised In	Rabbit
Species Reactivity	Human, Mouse, Rat
Specificity	The antibody detects endogenous level of JAK2 only when phosphorylated at tyrosine 221.
Tested Applications	ELISA, IHC; IHC: 1:50-1:100
Relevance	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-α, IFN-β, IFN-γ 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 α) from chromatin. Dawson M.A., Bannister A.J., Gottgens B., Foster S.D., Bartke T., Green A.R., Kouzarides T. Nature 461:819-822(2009) Guilluy C., Bregeon J., Toumaniantz G., Rolli-Derkinderen M., Retailleau K., Loufrani L., Henrion D., Scalbert E., Bril A., Torres R.M., Offermanns S., Pacaud P., Loirand G. Nat. Med. 16:183-190(2010) The cancer genome project Baxter E.J., Scott L.M., Campbell P.J., East C., Fourouclas N., Swanton S., Vassiliou G.S., Bench A.J., Boyd E.M., Curtin N., Scott M.A., Erber W.N., Green A.R. Lancet 365:1054-1061(2005)



Form	Supplied at 1.0mg/mL in phosphate buffered saline (without Mg ²⁺ and Ca ²⁺), pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.	
Purification Method	Antibodies were produced by immunizing rabbits with synthetic phosphopeptide and KLH conjugates. Antibodies were purified by affinity-chromatography using epitope-specific phosphopeptide. Non-phospho specific antibodies were removed by chromatography using	
Clonality	Polyclonal	
Alias	JTK10; THCYT3	
Product Type	Polyclonal Antibody	
Species	Homo sapiens (Human)	
Target Names	JAK2	
Image	 Immunohistochemical analysis of paraffin-embedded human breast carcinoma tissue, using JAK2 (phospho-Tyr221) antibody.	
Product Modify	Phospho-Tyr221	