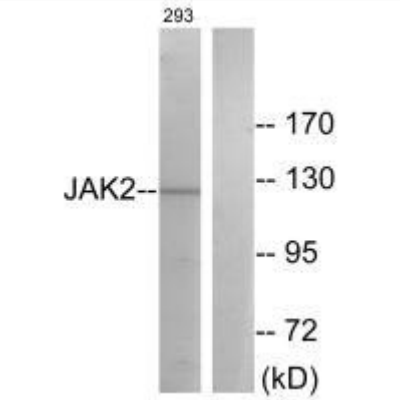
JAK2 (Ab-570) Antibody

Product Code	CSB-PA281490
Storage	Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.
Uniprot No.	O60674
Immunogen	Synthesized non-phosphopeptide derived from Human JAK2 around the phosphorylation site of tyrosine 570 (G-D-Y(p)-G-Q).
Raised In	Rabbit
Species Reactivity	Human,Mouse,Rat
Specificity	The antibody detects endogenous levels of total JAK2 protein.
Tested Applications	ELISA,WB,IF;WB:1:500-1:3000,IF:1:100-1:500
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-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. 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. Saltzman A., Biochem. Biophys. Res. Commun. 246:627-633(1998). Dalal I., Blood 91:844-851(1998). Peeters P., Blood 90:2535-2540(1997)
Form	Rabbit IgG in phosphate buffered saline (without Mg2+ and Ca2+), pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Purification Method	The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.

Clonality	Polyclonal
Alias	EC 2.7.10.2; JAK-2; JAK2; Janus kinase 2; kinase Jak2
Product Type	Polyclonal Antibody
Species	Homo sapiens (Human)
Target Names	JAK2

Image



Western blot analysis of extracts from 293 cells, treated with etoposide (25uM, 24hours), using JAK2 (Ab-570) antibody.

Immunofluorescence analysis of NIH/3T3 cells, using JAK2 (Ab-570) antibody.