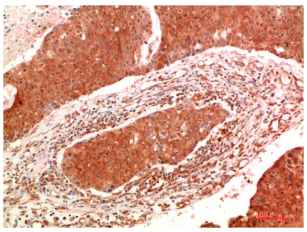
JAK2 (6B4) Mouse mAb

db6585 **Package : 50μL 100μL**

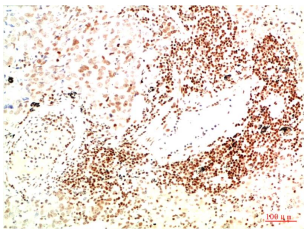
Product Name : JAK2 (6B4) Mouse mAb
Cat.No.: db6585
Synonyms : JAK2; Tyrosine-protein kinase JAK2; Janus kinase 2; JAK-2
Application : IHC-P
Reactivity : Human, Rat, Mouse
Host species : Mouse

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).
Immunogen	Synthetic peptide conjugated to KLH
Gene ID	3717
Swiss Prot	O60674
Synonyms	JAK2; Tyrosine-protein kinase JAK2; Janus kinase 2; JAK-2

Reactivity	Human, Rat, Mouse
Application	IHC-P
Recommended dilution	IHC: 1:50-1:100
Calculated MW	120 kDa
Host species	Mouse
Clonality	Monoclonal
Clonality No.	6B4-8G2-1C4
Isotype	IgG1
Purity	Affinity Purification
Conjugation	Un-conjugated
Storage Stability	Store at -20°C. Supplied in PBS, 50% Glycerol(pH 7.3), 0.02% sodium azide and 0.5% BSA . Stable for 12 months from date of receipt.



Immunohistochemistry analysis of paraffin-embedded Human Breast Carcinoma Tissue using JAK2 (6B4) antibody.High-pressure and temperature Sodium Citrate pH 6.0 was used for antigen retrieval.



Immunohistochemical analysis of paraffin-embedded Human tonsils using JAK2 (6B4) antibody.High-pressure and temperature Sodium Citrate pH 6.0 was used for antigen retrieval.