

Anti-JAK2 Monoclonal Antibody

Catalog Number: M00027

About JAK2

The ion channels activated by glutamate are typically divided into two classes. Those that are sensitive to N-methyl-D-aspartate (NMDA) are designated NMDA receptors (NMDAR) while those activated by alpha-amino-3-hydroxy-5-methyl-4-isoxalone propionic acid (AMPA) are known as AMPA receptors (AMPA). The AMPAR are comprised of four distinct glutamate receptor subunits designated (GluR1-4) and they play key roles in virtually all excitatory neurotransmission in the brain (Keinänen et al., 1990; Hollmann and Heinemann, 1994). The GluR1 subunit is widely expressed throughout the nervous system. Phosphorylation of Ser-845 on GluR1 is thought to be mediated by PKA and phosphorylation of this site increases the conductance of the AMPAR (Roche et al., 1996; Banke et al., 2000). In addition, phosphorylation of this site has been linked to synaptic plasticity as well as learning and memory (Lee et al., 2003; Esteban et al., 2003).

Overview

Product Name	Anti-JAK2 Monoclonal Antibody
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-JAK2 Monoclonal Antibody catalog # M00027. Tested in WB, IHC, ICC/IF, IP applications. This antibody reacts with Human, Mouse, Rat.
Application	IP, IF, IHC, ICC, WB
Clonality	Monoclonal COG-10
Formulation	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.
Storage Instructions	Store at -20°C for one year. For short term storage and frequent use, store at 4°C for up to one month. Avoid repeated freeze-thaw cycles.
Host	Rabbit
Uniprot ID	O60674

Technical Details

Immunogen	A synthesized peptide derived from human JAK2 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.
Isotype	Rabbit IgG
Form	Liquid

Concentration	Actual concentration vary by lot. Use suggested dilution ratio to decide dilution procedure.
Purification	Affinity-chromatography
Suggested Dilutions	Dilute the sample so that the expected range of concentrations fall within the detection range of this kit. If the expected range of concentration is unknown, a pilot test should be conducted to decide the optimal dilution ratio for your samples. Some PubMed article(s) citing the expression level of this target are as follows: Boster Bio's internal QC testing used: WB 1:500-1:2000 IHC 1:50-1:200 ICC/IF 1:50-1:200 IP 1:50-100

Anti-JAK2 Monoclonal Antibody (M00027) Images

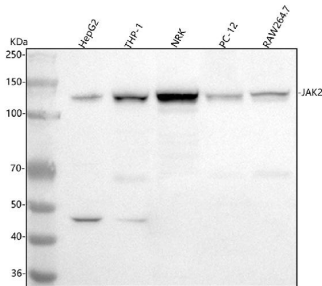


Figure 1. Western blot analysis of JAK2 using anti-JAK2 antibody (M00027).

Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions.

Lane 1: human HepG2 whole cell lysates,

Lane 2: human THP-1 whole cell lysates,

Lane 3: rat NRK whole cell lysates,

Lane 4: rat PC-12 whole cell lysates,

Lane 5: mouse RAW264.7 whole cell lysates.

After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes.

Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT.

The membrane was incubated with rabbit anti-JAK2 antigen affinity purified monoclonal antibody (Catalog # M00027) at 1:500 overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed

with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:1000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit

(Catalog # EK1002) with Tanon 5200 system. A specific band was detected for JAK2 at approximately 131 kDa. The expected band size for JAK2 is at 131 kDa.

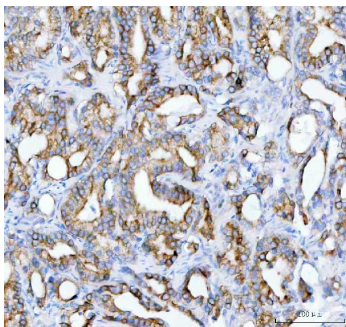


Figure 2. IHC analysis of JAK2 using anti-JAK2 antibody (M00027).

JAK2 was detected in a paraffin-embedded section of human prostate cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1:50 rabbit anti-JAK2 Antibody (M00027) overnight at 4°C.

Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C.

The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.

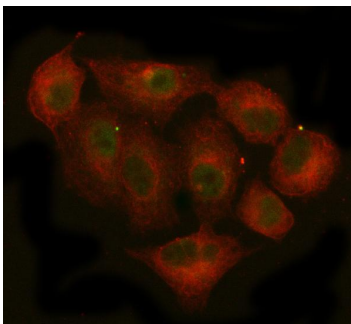


Figure 3. IF analysis of JAK2 using anti-JAK2 antibody (M00027) and anti-Beta Tubulin antibody (M01857-3).

JAK2 was detected in immunocytochemical section of A549 cell. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent (AR0022) for 15 mins.

The cells were blocked with 10% goat serum. And then incubated at 1:50 with rabbit anti-JAK2 Antibody (M00027) and mouse anti-Beta Tubulin antibody (M01857-3) overnight at 4°C.

DyLight®488 Conjugated Goat Anti-Rabbit IgG (BA1127) and Cy3 Conjugated Goat Anti-Mouse IgG (BA1031) were used as secondary antibody at 1:500 dilution

and incubated for 30 minutes at 37°C. Visualize using a fluorescence microscope and filter sets appropriate for the label used.

2 Publications Citing This Product

1. PubMed ID: 33152901, He J,Zhang W,Di T,Meng J,Qi Y,Li G,Zhang Y,Su H,Yan W.Water extract of sporoderm-broken spores of Ganoderma lucidum enhanced pd-l1 antibody efficiency through downregulation and relieved complications of pd-l1 monoclonal antibody.Biomed Pharmacother.2020

2. PubMed ID: 33542641, Zhang Q,Duan HX,Li RL,Sun JY,Liu J,Peng W,Wu CJ,Gao YX. Inducing Apoptosis and Suppressing Inflammatory Reactions in Synovial Fibroblasts are Two Important Ways for Guizhi-Shaoyao-Zhimu Decoction Against Rheumatoid Arthritis. J Inflamm Res.2021 Jan 26;14:

Visit bosterbio.com/anti-jak2-antibody-m00027-boster.html to see all 2 publications.

Submit a product review to Biocompare.com

Submit a review of this product to Biocompare.com to receive a \$20 Amazon.com giftcard! Your reviews help your fellow scientists make the right decisions. Thank you for your contribution.



Anti-JAK2 Monoclonal Antibody