abcam

Product datasheet

Anti-JAK3 antibody [EP909Y] - BSA and Azide free ab232005

Recombinant RabMAb

5 Images

Overview

Product name	Anti-JAK3 antibody [EP909Y] - BSA and Azide free
Description	Rabbit monoclonal [EP909Y] to JAK3 - BSA and Azide free
Tested applications	**Suitable for:** Flow Cyt, WB, IP
Species reactivity	**Reacts with:** Human
Immunogen	Synthetic peptide within Human JAK3 (C terminal). The exact sequence is proprietary.
Positive control	Flow Cytometry: Jurkat cells.
General notes	ab232005 is a carrier-free antibody designed for use in antibody labeling, including fluorochromes, metal isotopes, oligonucleotides, enzymes. Our carrier-free formats are supplied in a buffer free of BSA, sodium azide and glycerol for higher conjugation efficiency. Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with <1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold. ab232005 is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm. *Maxpar® is a trademark of Fluidigm Canada Inc.* Mouse, Rat: We have preliminary internal testing data to indicate this antibody may not react with these species. Please contact us for more information. Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMab® patents. This product is a recombinant rabbit monoclonal antibody.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.

Storage buffer	Constituent: PBS
Purity	Affinity purified
Clonality	Monoclonal

Applications

Our Abpromise guarantee covers the use of **ab232005** in the following tested applications.

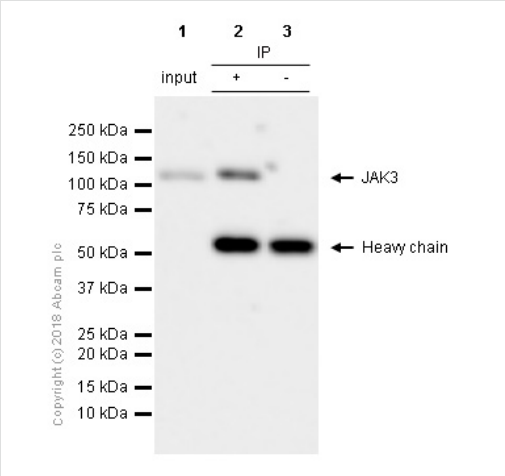
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
Flow Cyt		Use at an assay dependent concentration. ab199376 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.
WB		Use at an assay dependent concentration. Predicted molecular weight: 125 kDa.
IP		Use at an assay dependent concentration.

Target

Function	Tyrosine kinase of the non-receptor type, involved in the interleukin-2 and interleukin-4 signaling pathway. Phosphorylates STAT6, IRS1, IRS2 and PI3K.
Tissue specificity	In NK cells and an NK-like cell line but not in resting T-cells or in other tissues. The S-form is more commonly seen in hematopoietic lines, whereas the B-form is detected in cells both of hematopoietic and epithelial origins.
Involvement in disease	Defects in JAK3 are a cause of severe combined immunodeficiency autosomal recessive T-cell-negative/B-cell-positive/NK-cell-negative (T(-)B(+)NK(-) SCID) [MIM:600802]. A form of severe combined immunodeficiency (SCID), a genetically and clinically heterogeneous group of rare congenital disorders characterized by impairment of both humoral and cell-mediated immunity, leukopenia, and low or absent antibody levels. Patients present in infancy recurrent, persistent infections by opportunistic organisms. The common characteristic of all types of SCID is absence of T-cell-mediated cellular immunity due to a defect in T-cell development.
Sequence similarities	Belongs to the protein kinase superfamily. Tyr protein kinase family. JAK subfamily. Contains 1 FERM domain. Contains 1 protein kinase domain. Contains 1 SH2 domain.
Domain	Possesses two phosphotransferase domains. The second one probably contains the catalytic domain (By similarity), while the presence of slight differences suggest a different role for domain 1.
Post-translational modifications	Tyrosine phosphorylated in response to IL-2 and IL-4.
Cellular localization	Endomembrane system. Wholly intracellular, possibly membrane associated.

Images

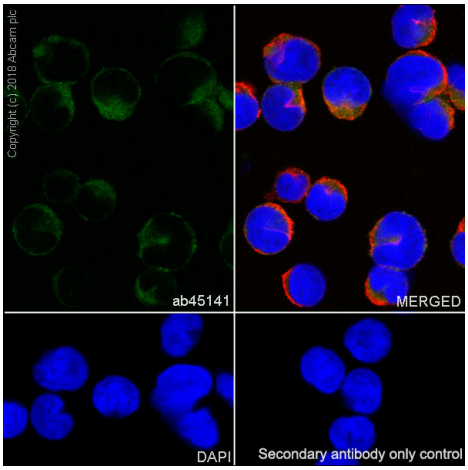


Immunoprecipitation - Anti-JAK3 antibody [EP909Y] - BSA and Azide free (ab232005)

Lane 1 (input): TF-1(Human Erythroleukemia erythroblast) whole cell lysate, 10µg
Lane 2 (+): TF-1 whole cell lysate
Lane 3 (-): Rabbit monoclonal IgG (ab172730) instead of ab45141 in TF-1 whole cell lysate.

Ab45141 immunoprecipitating JAK3 in TF-1 whole cell lysate. For western blotting, ab45141 was used as a primary antibody at 1:500 dilution (2.42 µg/ml). VeriBlot for IP Detection Reagent (HRP) (ab131366), was used for detection at 1/1,000 dilution. Blocking and diluting buffer used was 5% NFDM/TBST.

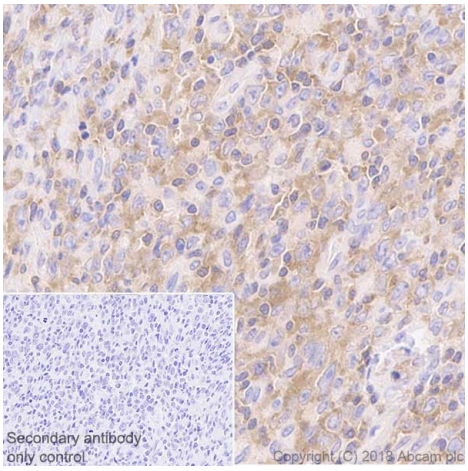
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab45141).



Immunocytochemistry/ Immunofluorescence - Anti-JAK3 antibody [EP909Y] - BSA and Azide free (ab232005)

Immunocytochemistry/Immunofluorescence analysis of KARPAS-299 (human anaplastic large cell lymphoma) labelling JAK3 with ab45141 at a dilution of 1:100 dilution (12 µg/ml). Cells were fixed with 100% Methanol. Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) (1:1000 dilution (2 µg/ml)) was used as the secondary antibody. The cells were co-stained with Ab195889 Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) 1:200 (2.5 µg/ml). Nuclei counterstained with DAPI (blue). Control: PBS instead of the primary antibody.

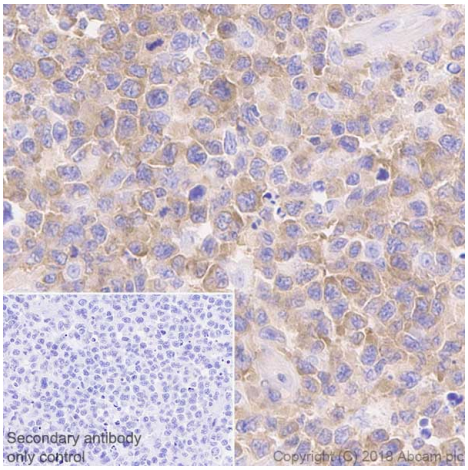
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab45141).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-JAK3 antibody [EP909Y] - BSA and Azide free (ab232005)

Immunohistochemistry (Formalin/PFA-fixed paraffin embedded sections) analysis of Human NK cell lymphoma tissue sections labeling JAK3 using purified ab45141. Samples were incubated the primary antibody at 1:2000 dilution (0.60 µg/ml). Hematoxylin was used as a counterstain. PBS instead of primary antibody was used for negative control. A ready to use ImmunoHistoProbe one step HRP Polymer at 1:0 dilution was used as the secondary antibody. Heatm mediated antigen retrieval was performed using ab93684 (Tris/EDTA buffer, pH 9.0).

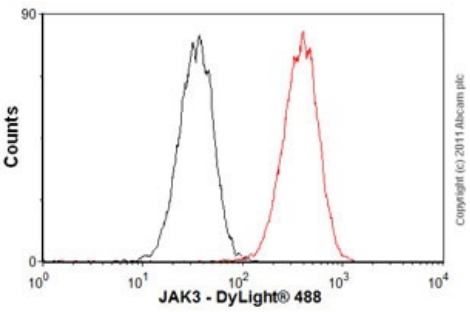
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab45141).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-JAK3 antibody [EP909Y] - BSA and Azide free (ab232005)

Immunohistochemistry (Formalin/PFA-fixed paraffin embedded sections) analysis of Human large B cell lymphoma tissue sections labeling JAK3 using purified ab45141. Samples were incubated the primary antibody at 1:2000 dilution (0.60 µg/ml). Hematoxylin was used as a counterstain. PBS instead of primary anitbody was used for negative control. A ready to use ImmunoHistoProbe one step HRP Polymer at 1:0 dilution was used as the secondary antibody. Heatm mediated antigen retrieval was performed using ab93684 (Tris/EDTA buffer, pH 9.0).

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab45141).



Flow Cytometry - Anti-JAK3 antibody [EP909Y] - BSA and Azide free (ab232005)

Overlay histogram showing Jurkat (Human T cell leukemia cell line from peripheral blood) cells stained with ab45141 (red line). The cells were fixed with 80% methanol (5 minutes) and then permeabilized with 0.1% PBS-Tween for 20 minutes. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions. The cells were then incubated with the antibody (ab45141, 1/100 dilution) for 30 minutes at 22ºC. The secondary antibody used was DyLight® 488 goat anti-rabbit IgG (H+L) (ab96899) at 1/500 dilution for 30 minutes at 22ºC. Isotype control antibody (black line) was rabbit IgG (1 µg/1x10^6 cells) used under the same conditions. Acquisition of >5,000 events was performed. This antibody gave a positive signal in Jurkat cells fixed with 4% paraformaldehyde (10

minutes)/permeabilized in 0.1% PBS-Tween used under the same conditions.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab45141).

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