abcam

ab278638

APC Anti-JAK1 (phospho Y1034 + Y1035) antibody [Jak1Y10221023-F11]

Recombinant

Key facts

Isotype	IgG
Host species	Rabbit
Conjugation	APC
Excitation/Emission	Ex: 650nm, Em: 660nm
Storage buffer	Preservative: 0.09% Sodium azide Constituents: PBS, 0.2% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	Synthetic Peptide within Human JAK1 pY1034 + Y1035. The exact immunogen used to generate this antibody is proprietary information. Database link P23458
Clone number	Jak1Y10221023-F11
Purification technique	Affinity purification Protein A/G
Light chain type	kappa

Reactivity data

Flow Cyt

Tested

Species	Human

Dilution info	5 µL for 10^6 Cells
Notes	-

Target data

See full target information JAK1 pY1034 + Y1035

Function	Tyrosine kinase of the non-receptor type, involved in the IFN-alpha/beta/gamma signal pathway (PubMed:16239216, PubMed:28111307, PubMed:32750333, PubMed:7615558, PubMed:8232552). Kinase partner for the interleukin (IL)-2 receptor (PubMed:11909529) as well as interleukin (IL)-10 receptor (PubMed:12133952). Kinase partner for the type I interferon receptor IFNAR2 (PubMed:16239216, PubMed:28111307, PubMed:32750333, PubMed:7615558, PubMed:8232552). In response to interferon-binding to IFNAR1-IFNAR2 heterodimer, phosphorylates and activates its binding partner IFNAR2, creating docking sites for STAT proteins (PubMed:7759950). Directly phosphorylates STAT proteins but also activates STAT signaling through the transactivation of other JAK kinases associated with signaling receptors (PubMed:16239216, PubMed:32750333, PubMed:8232552).

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C
Storage information	Store in the dark

Notes

What are the advantages of a recombinant monoclonal antibody?
This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	JAK1 also known as Janus Kinase 1 plays an essential role in transmitting signals within cells. It is a tyrosine kinase enzyme with a molecular weight of approximately 130 kDa. JAK1 is expressed broadly in various tissues and is involved in cytokine receptor signaling. The kinase activity of JAK1 gets activated upon cytokine binding to its respective receptor which leads to phosphorylation events and downstream signaling cascades.
Biological function summary	This enzyme participates significantly in the immune response and hematopoiesis by being part of the JAK-STAT signaling pathway complex. When activated JAK1 phosphorylates specific tyrosine residues on the receptor creating docking sites for STAT proteins which then get phosphorylated by JAK1. This phosphorylation allows STAT proteins to dimerize and translocate to the nucleus affecting gene expression involved in growth survival and differentiation processes.
Pathways	JAK1 is importantly engaged in the JAK-STAT pathway and the Interferon signaling pathway. Within these pathways JAK1 collaborates closely with other proteins like JAK2 TYK2 and STAT proteins. It acts as a mediator of the cellular response to a variety of cytokines and growth factors playing a role in the regulation of immune responses and cell proliferation.
Associated diseases and disorders	Dysregulation of JAK1 associates with autoimmune diseases like rheumatoid arthritis and certain cancers. JAK1 inhibitors have been developed as therapeutic agents for these conditions targeting its kinase activity to modulate aberrant signaling. The interaction between JAK1 and other kinases such as JAK2 and transcription factors like STATs highlights its importance in disease mechanisms providing a target for drugs to manage inflammatory and malignant disorders.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

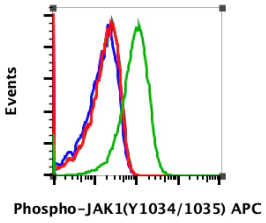
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

1 product image



Flow Cytometry - APC Anti-JAK1 (phospho Y1034 + Y1035) antibody [Jak1Y10221023-F11] (ab278638)

Flow cytometric analysis of Jurkat cells untreated (red) or treated with IFNα + IL-4 + pervanadate (green) using ab278638, or concentration-matched Rabbit (G9) mAb IgG Isotype Control (FITC Conjugate) for cells untreated (black) or treated with IFNα + IL-4 + pervanadate (blue).

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.