abcam

ab278689

Anti-ATF2 (phospho T71) antibody [ATF2T71-G3]

Recombinant | 20ul selling size

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	Preservative: 0.02% Sodium azide Constituents: PBS, 50% Glycerol (glycerin, glycerine), 0.1% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	Synthetic Peptide within Human ATF2 pT71. The exact immunogen used to generate this antibody is proprietary information. Database link P15336
Clone number	ATF2T71-G3
Purification technique	Affinity purification Protein A/G
Light chain type	kappa

Reactivity data

Flow Cyt

Tested

Species	Mouse
Dilution info	0.001-1 µg/mL
Notes	-

Species	Human

Dilution info	0.001-1 µg/mL
Notes	-

WB

Tested

Species	Human
Dilution info	0.1 µg/mL
Notes	-

Expected

Species	Mouse
Dilution info	Use at an assay dependent concentration.
Notes	-

Target data

See full target information ATF2 pT71

Function

Transcriptional activator which regulates the transcription of various genes, including those involved in anti-apoptosis, cell growth, and DNA damage response. Dependent on its binding partner, binds to CRE (cAMP response element) consensus sequences (5'-TGACGTCA-3') or to AP-1 (activator protein 1) consensus sequences (5'-TGACTCA-3'). In the nucleus, contributes to global transcription and the DNA damage response, in addition to specific transcriptional activities that are related to cell development, proliferation and death. In the cytoplasm, interacts with and perturbs HK1- and VDAC1-containing complexes at the mitochondrial outer membrane, thereby impairing mitochondrial membrane potential, inducing mitochondrial leakage and promoting cell death. The phosphorylated form (mediated by ATM) plays a role in the DNA damage response and is involved in the ionizing radiation (IR)-induced S phase checkpoint control and in the recruitment of the MRN complex into the IR-induced foci (IRIF). Exhibits histone acetyltransferase (HAT) activity which specifically acetylates histones H2B and H4 in vitro (PubMed:10821277). In concert with CUL3 and RBX1, promotes the degradation of KAT5 thereby attenuating its ability to acetylate and activate ATM. Can elicit oncogenic or tumor suppressor activities depending on the tissue or cell type.

Storage

Shipped at conditions	Blue Ice

Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

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	The ATF2 protein also referred to as ATF-2 or activating transcription factor 2 plays a significant role as a transcription factor in cellular processes. It weighs approximately 75 kDa and is expressed in many tissues with higher levels in the brain heart and skeletal muscle. Functionally ATF2 belongs to the leucine zipper family of proteins facilitating its ability to bind DNA and regulate the expression of genes involved in stress responses development and growth.
Biological function summary	ATF2 takes part in the regulation of gene expression in response to various stimuli. It often forms a complex with other proteins such as c-Jun when binding to the DNA. This complex then influences the transcription of genes that respond to cellular stress and DNA damage. By phosphorylating specific serine residues cellular kinases activate ATF2 which then translocates to the nucleus where it exerts its function.

Pathways	ATF2 integrates into the MAPK and JNK signaling cascades which are important for transmitting stress signals from the cell surface to the nucleus. Through these pathways ATF2 interacts with proteins such as JNK and p38 MAPK modulating the transcription of downstream genes that control cell proliferation apoptosis and differentiation. Its role in these pathways positions ATF2 as a critical node where various signaling inputs merge to influence cellular outcomes.
Associated diseases and disorders	ATF2 has associations with conditions such as cancer and neurological disorders. Aberrant regulation of ATF2 can contribute to oncogenesis by affecting cell cycle control and apoptosis. For example in melanoma altered ATF2 activity is linked to tumor progression and resistance to apoptosis. Additionally in neurological disorders its interaction with proteins like phospho-c-Jun influences neuronal survival and plasticity implicating ATF2 in pathologies related to neurodegeneration and cognitive dysfunction.

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

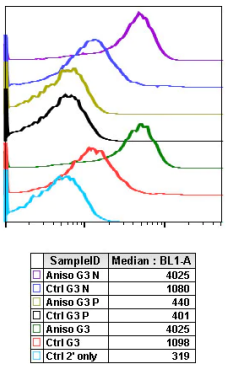
We do not recommend this combination. It is not covered by our product promise.

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.

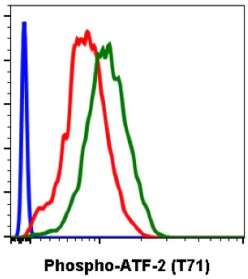
5 product images



Flow Cytometry - Anti-ATF2 (phospho T71) antibody [ATF2T71-G3] (ab278689)

ATF2 (phospho T71) Flow Cytometry staining using rabbit Anti-ATF2 (phospho T71) antibody

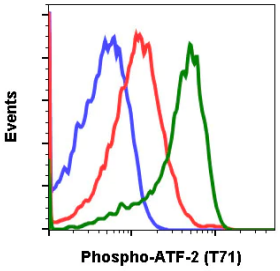
Peptide blocking flow cytometric analysis of Jurkat cells secondary antibody only negative control (light blue) or untreated (red) or anisomycin-treated (green) or untreated and blocked with phospho-peptide (black) or anisomycin and blocked with phospho peptide (gold) or untreated and blocked with non-phospho peptide (dark blue) or anisomycin and blocked with non-phospho peptide (purple) using ab278689 at 0.1µg/mL.



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ATF2 (phospho T71) Flow Cytometry staining using rabbit Anti-ATF2 (phospho T71) antibody

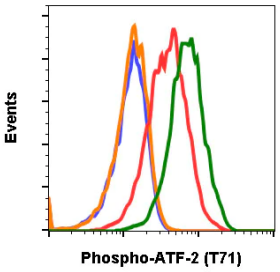
Flow cytometric analysis of Jurkat cells secondary antibody only negative control (blue) or untreated (red) or treated with anisomycin (green) using ab278689.



Flow Cytometry - Anti-ATF2 (phospho T71) antibody [ATF2T71-G3] (ab278689)

ATF2 (phospho T71) Flow Cytometry staining using rabbit Anti-ATF2 (phospho T71) antibody

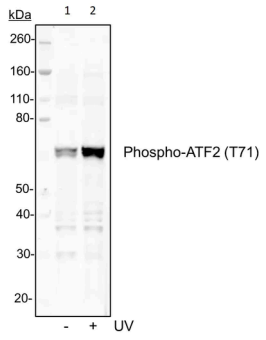
Flow cytometric analysis of Jurkat cells secondary antibody only negative control (blue) or untreated (red) or treated with anisomycin (green) using ab278689 at 0.1µg/mL.



Flow Cytometry - Anti-ATF2 (phospho T71) antibody [ATF2T71-G3] (ab278689)

ATF2 (phospho T71) Flow Cytometry staining using rabbit Anti-ATF2 (phospho T71) antibody

Flow cytometric analysis of NIH3T3 cells secondary antibody only negative control (blue) or 0.1 µg/mL of isotype control (orange) or untreated (red) or treated with UV and PMA (green) using ab278689 at 0.1µg/mL.



Western blot - Anti-ATF2 (phospho T71) antibody [ATF2T71-G3] (ab278689)

All lanes:
Western blot - Anti-ATF2 (phospho T71) antibody [ATF2T71-G3] (ab278689) at 0.1 µg/mL

Lane 1:
HEK-293T cell extract untreated

Lane 2:
HEK-293T cell extract treated with UV

Predicted band size: 55 kDa

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