abcam

ab203119

Anti-ATF6 antibody

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.4 Preservative: 0.02% Proclin 300 Constituents: 50% Glycerol (glycerin, glycerine), 48.98% TBS, 1X, 1% BSA
Form	Liquid
Clonality	Polyclonal
Immunogen	Synthetic Peptide within Human ATF6 aa 300-350 conjugated to Keyhole Limpet Haemocyanin. The exact immunogen used to generate this antibody is proprietary information. Database link P18850
Purification technique	Affinity purification Protein A
Concentration	1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IHC-P

Tested

Species	Human
Dilution info	1/100 - 1/500
Notes	Use at 1/50 - 1/200 with fluorescent detection methods. Perform heat-mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

WB

Tested

Species	Human
Dilution info	1/100 - 1/1000
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/200
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/100
Notes	-

Target data

See full target information ATF6

Function

Cyclic AMP-dependent transcription factor ATF-6 alpha. Precursor of the transcription factor form (Processed cyclic AMP-dependent transcription factor ATF-6 alpha), which is embedded in the endoplasmic reticulum membrane (PubMed:10564271, PubMed:11158310, PubMed:11779464). Endoplasmic reticulum stress promotes processing of this form, releasing the transcription factor form that translocates into the nucleus, where it activates transcription of genes involved in the unfolded protein response (UPR) (PubMed:10564271, PubMed:11158310, PubMed:11779464). Processed cyclic AMP-dependent transcription factor ATF-6 alpha. Transcription factor that initiates the unfolded protein response (UPR) during endoplasmic reticulum stress by activating transcription of genes involved in the UPR (PubMed:10564271, PubMed:11158310, PubMed:11163209, PubMed:11779464). Binds DNA on the 5'-CCAC[GA]-3'half of the ER stress response element (ERSE) (5'-CCAAT-N(9)-CCAC[GA]-3') and of ERSE II (5'-ATTGG-N-CCACG-3') (PubMed:10564271, PubMed:11158310, PubMed:11779464). Binding to ERSE requires binding of NF-Y to ERSE. Could also be involved in activation of transcription by the serum response factor (PubMed:10564271,

PubMed:11158310, PubMed:11779464). May play a role in foveal development and cone function in the retina (PubMed:26029869).

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

Supplementary info

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

Activity summary	Activating Transcription Factor 6 (ATF6) also known as ATF 6 is a significant protein in the endoplasmic reticulum (ER) stress response. The ATF6 protein has a molecular weight of approximately 84 kDa. It expresses predominantly in the endoplasmic reticulum membrane and plays a critical role in the unfolded protein response (UPR). During ER stress ATF6 relocates to the Golgi apparatus where it undergoes cleavage to become an active transcription factor. This process helps the cell to manage the accumulation of unfolded proteins.
Biological function summary	ATF6 operates as part of the transcription regulation mechanisms responding to ER stress. The ATF6 protein is essential in managing the expression of chaperone genes and ER-associated degradation (ERAD) components thereby maintaining protein homeostasis. ATF6 itself does not operate within a traditional complex but its activation involves proteolytic cleavage which subsequently releases the active form to the nucleus where it influences gene expression to alleviate stress conditions.
Pathways	ATF6 is prominently involved in the unfolded protein response pathway which manages cell survival and stress adaptation. This pathway closely interacts with other proteins like IRE1 and PERK forming a network that modulates the transcription of UPR target genes. Additionally ATF6 contributes to checkpoint control pathways that stabilize cellular environment by regulating genes related to chaperone and protein folding.
Associated diseases and disorders	Malfunction or dysregulation of ATF6 links to conditions like diabetes and neurodegenerative diseases. In diabetes improper ATF6 function affects insulin

signaling and glucose homeostasis often alongside proteins such as XBP1. In neurodegenerative diseases an inappropriate response to ER stress influences the progression of disorders like Alzheimer's disease where protein misfolding and aggregation play pivotal roles. Understanding how ATF6 interplays with these diseases could lead to new therapeutic avenues.

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

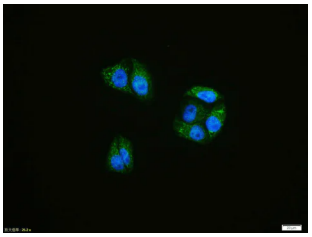
We do not recommend this combination. It is not covered by our product promise.

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.

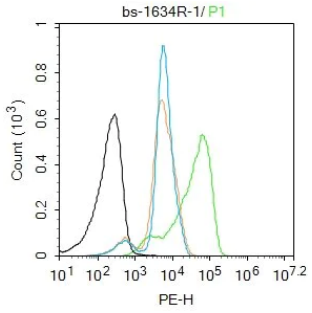
4 product images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-ATF6 antibody (ab203119)

ATF6 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-ATF6 antibody

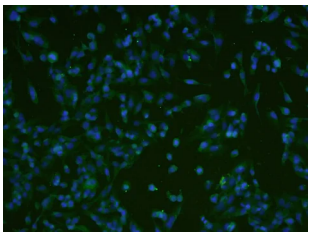
Immunohistochemical analysis of HeLa cells stained for ATF6 using ab203119 at a dilution of 1:100.



Flow Cytometry (Intracellular) - Anti-ATF6 antibody (ab203119)

ATF6 Flow Cytometry (Intracellular) staining using rabbit Anti-ATF6 antibody

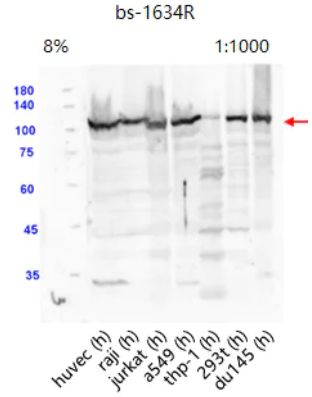
Jurkat cells were fixed with 4% PFA for 10min at room temperature,permeabilized with 90% ice-cold methanol for 20 min at -20□, and incubated in 5% BSA blocking buffer for 30 min at room temperature. Cells were then stained with ATF6 Antibody (ab203119) at 1:100 dilution in blocking buffer and incubated for 30 min at room temperature, washed twice with 2%BSA in PBS, followed by secondary antibody incubation for 40 min at room temperature. Acquisitions of 20,000 events were performed. Cells stained with primary antibody (green), and isotype control (orange).



Immunocytochemistry/ Immunofluorescence - Anti-ATF6 antibody (ab203119)

ATF6 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-ATF6 antibody

Immunocytochemistry/ Immunofluorescence analysis of U-251 cells labeling ATF6 with ab203119 at 1/200 (diluted in PBS and incubated for 2 hours at 37°C). Goat Anti-Rabbit IgG (H+L) FITC conjugated antibody was used as the secondary antibody. Nuclei were stained with DAPI (blue).



Western blot - Anti-ATF6 antibody (ab203119)

All lanes:
Western blot - Anti-ATF6 antibody (ab203119) at 1/1000 dilution

Lane 1:
HUVEC cell lysate

Lane 2:
Raji cell lysate

Lane 3:
Jurkat cell lysate

Lane 4:
A549 cell lysate

Lane 5:
thp-1 cell lysate

Lane 6:
293T cell lysate

Lane 7:
du145 cell lysate

Secondary

All lanes:
Conjugated secondary at 1/2000 dilution

Predicted band size: 74 kDa

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