10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

ATF6 Rabbit pAb

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Catalog # AP52147

Product Information

Application	WB, IHC-P, IHC-F, IF
Primary Accession	P18850
Reactivity	Rat, Human, Mouse
Predicted	Pig, Rabbit, Horse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	74585
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human ATF6
Epitope Specificity	301-400/670
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SUBCELLULAR LOCATION	Endoplasmic reticulum membrane; Single-pass type II membrane protein. Processed cyclic AMP-dependent transcription factor ATF-6 alpha: Nucleus. Note=Under ER stress the cleaved N-terminal cytoplasmic domain translocates into the nucleus.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	ATF6 is a transcription factor that acts during endoplasmic reticulum stress by activating unfolded protein response target genes. It 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'). Binding to ERSE requires binding of NF-Y to ERSE. ATF6 could also be involved in activation of transcription by the serum response factor. ATF6 exists as a homodimer and heterodimer with ATF6 beta. The dimer interacts with the nuclear transcription factor Y (NF-Y) trimer through direct binding to NF-Y subunit C (NF-YC). It also interacts with the transcription factors GTF2I, YY1 and SRF. Under ER stress the cleaved N-terminal cytoplasmic domain translocates into the nucleus. The basic domain of ATF6 functions as a nuclear localization signal and the basic leucine zipper domain is sufficient for association with the NF-Y trimer and binding to ERSE. During the unfolded protein response an approximately 50 kDa fragment containing the cytoplasmic transcription factor domain is released by proteolysis. The cleavage seems to be performed sequentially by site 1 and site 2 proteases. ATF6 is N glycosylated, phosphorylated in vitro by MAPK14/P38MAPK and belongs to the bZIP family.

Additional Information

Gene ID	22926

Other Names	Cyclic AMP-dependent transcription factor ATF-6 alpha, cAMP-dependent transcription factor ATF-6 alpha, Activating transcription factor 6 alpha, ATF6-alpha, Processed cyclic AMP-dependent transcription factor ATF-6 alpha, ATF6
Dilution	WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,ICC/IF=1:100-500,IF=1:100-500,Flow-Cyt=1 □g /test
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	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).
Cellular Location	Endoplasmic reticulum membrane; Single-pass type II membrane protein. Golgi apparatus membrane; Single-pass type II membrane protein. Note=Translocates from the endoplasmic reticulum to the Golgi, where it is processed.
Tissue Location	Ubiquitous..

Background

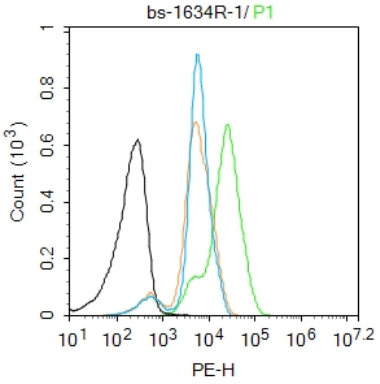
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References

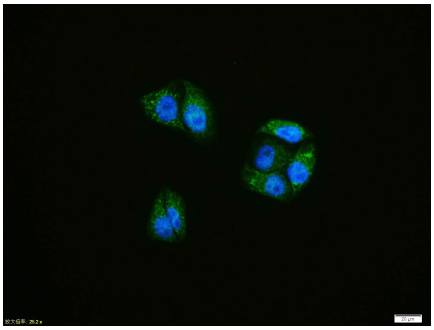
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Yoshida H.,et al.J. Biol. Chem. 273:33741-33749(1998).
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Hai T.,et al.Genes Dev. 3:2083-2090(1989).
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Images

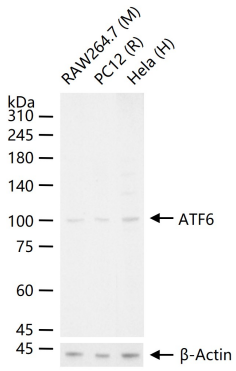
Blank control: Jurkat.
Primary Antibody (green line): Rabbit Anti-ATF6 antibody (AP52147)
Dilution: 1 µg /10^6 cells;
Isotype Control Antibody (orange line): Rabbit IgG .
Secondary Antibody : Goat anti-rabbit IgG-FITC



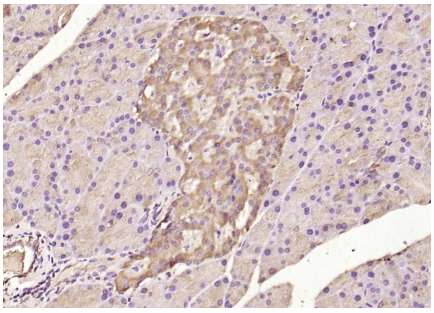
Dilution: 1 μg /test.
Protocol
The cells were fixed with 4% PFA (10min at room temperature)and then permeabilized with 90% ice-cold methanol for 20 min at-20℃.The cells were then incubated in 5%BSA to block non-specific protein-protein interactions for 30 min at room temperature .Cells stained with Primary Antibody for 30 min at room temperature. The secondary antibody used for 40 min at room temperature. Acquisition of 20,000 events was performed.



Hela cell; 4% Paraformaldehyde-fixed; Triton X-100 at room temperature for 20 min; Blocking buffer (normal goat serum, C-0005) at 37°C for 20 min; Antibody incubation with (ATF6) polyclonal Antibody, Unconjugated (AP52147) 1:100, 90 minutes at 37°C; followed by a conjugated Goat Anti-Rabbit IgG antibody at 37°C for 90 minutes, DAPI (blue, C02-04002) was used to stain the cell nuclei.



25 ug total protein per lane of various lysates (see on figure) probed with ATF6 polyclonal antibody, unconjugated (AP52147) at 1:1000 dilution and 4°C overnight incubation. Followed by conjugated secondary antibody incubation at r.t. for 60 min.



Paraformaldehyde-fixed, paraffin embedded (rat pancreas); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (ATF6) Polyclonal Antibody, Unconjugated (AP52147) at 1:200 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructionsand DAB staining.

Citations

- Acid Sphingomyelinase Mediates Oxidized-LDL Induced Apoptosis in Macrophage via Endoplasmic Reticulum Stress.

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