bs-1634R **[Primary Antibody]**

ATF6 Rabbit pAb

www.bioss.com.cn
sales@bioss.com.cn
techsupport@bioss.com.cn
400-901-9800

DATASHEET

Host: Rabbit **Isotype:** IgG

Clonality: Polyclonal

GeneID: 22926 **SWISS:** P18850

Target: ATF6

Immunogen: KLH conjugated synthetic peptide derived from human ATF6: 301-400/670.

Purification: affinity purified by Protein A

Concentration: 1mg/ml

Storage: 0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
Shipped at 4°C. Store at -20°C for one year. Avoid repeated freeze/thaw cycles.

Background: 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.

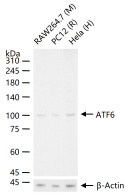
Applications: **WB** (1:500-2000)
IHC-P (1:100-500)
IHC-F (1:100-500)
IF (1:100-500)
Flow-Cyt (1μg /test)
ICC/IF (1:100)

Reactivity: Human, Mouse, Rat (predicted: Rabbit, Pig, Cow, Horse)

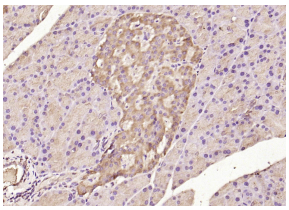
Predicted MW.: 75 kDa

Subcellular Location: Nucleus

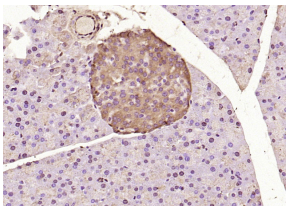
VALIDATION IMAGES



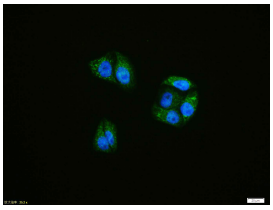
25 ug total protein per lane of various lysates (see on figure) probed with ATF6 polyclonal antibody, unconjugated (bs-1634R) at 1:1000 dilution and 4°C overnight incubation. Followed by conjugated secondary antibody incubation at r.t. for 60 min.



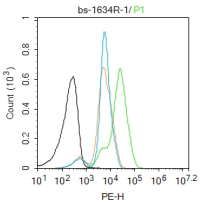
Paraformaldehyde-fixed, paraffin embedded (rat pancreas); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (ATF6) Polyclonal Antibody, Unconjugated (bs-1634R) at 1:200 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructionsand DAB staining.



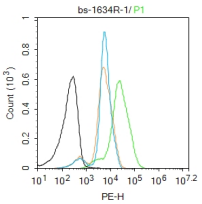
Paraformaldehyde-fixed, paraffin embedded (mouse pancreas); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (ATF6) Polyclonal Antibody, Unconjugated (bs-1634R) at 1:200 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructionsand DAB staining.



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 (bs-1634R) 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.



Blank control: Jurkat. Primary Antibody (green line): Rabbit Anti-ATF6 antibody (bs-1634R) Dilution: 1μg /10^6 cells; Isotype Control Antibody (orange line): Rabbit IgG . Secondary Antibody : Goat anti-rabbit IgG-FITC Dilution: 1μg /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°C.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.



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SELECTED CITATIONS

- **[IF=18.962]** Xue Li. et al. Dual regulation on oxidative stress and endoplasmic reticulum stress by [70] fullerenes for reversing insulin resistance in diabetes. NANO TODAY. 2022 Aug;45:101541 WB ;Mouse. 10.1016/j.nantod.2022.101541
- **[IF=6.684]** Balun Li. et al. Melatonin Promotes the Therapeutic Effect of Mesenchymal Stem Cells on Type 2 Diabetes Mellitus by Regulating TGF-β Pathway. Front Cell Dev Biol. 2021; 9: 722365 IHC ;Dog. 34722505
- **[IF=7.376]** Qiuchi Chen. et al. Suppression of cideb under endoplasmic reticulum stress exacerbated hepatic inflammation by inducing hepatic steatosis and oxidative stress. FREE RADICAL BIO MED. 2022 May;185:67 WB ;Fish. 35489563
- **[IF=6.208]** Yurong Fu. et al. Zearalenone Promotes LPS-Induced Oxidative Stress, Endoplasmic Reticulum Stress, and Accelerates Bovine Mammary Epithelial Cell Apoptosis. INT J MOL SCI. 2022 Jan;23(18):10925 WB ;Bovine. 36142835
- **[IF=5.793]** Chunyue Wang. et al. Neuroprotective effects of verbascoside against Alzheimer’ s disease via the relief of endoplasmic reticulum stress in Aβ-exposed U251 cells and APP/PS1 mice. J Neuroinflamm. 2020 Dec;17(1):1-16 WB ;Human. 33070776