Anti-ATF6 Antibody

ER1706-34

Product Type:	Rabbit polyclonal IgG, primary antibodies
Species reactivity:	Human, Rat
Applications:	WB, IF-Cell, IHC-P, FC
Molecular Wt:	75 kDa

Description: Transmembrane glycoprotein of the endoplasmic reticulum that functions as a transcription activator and initiates the unfolded protein response (UPR) during endoplasmic reticulum stress. Cleaved upon ER stress, the N-terminal processed cyclic AMP-dependent transcription factor ATF-6 alpha translocates to the nucleus where it activates transcription of genes involved in the UPR. Binds DNA on the 5'-CCAC[GA]-3'half of the ER stress response element (ERSE) (5'-CCAAT-N9-CCAC[GA]-3') and of ERSE II (5'-ATTGG-N-CCACG-3'). Binding to ERSE requires binding of NF-Y to ERSE. Could also be involved in activation of transcription by the serum response factor. May play a role in foveal development and cone function in the retina.

Immunogen: Recombinant protein within Human ATF6 aa 168-392 / 670.

Positive control: Hela, A431, HUVEC, K562, rat brain tissue, human kidney tissue.

Subcellular location: Endoplasmic reticulum membrane. Nucleus. Under ER stress the cleaved N-terminal cytoplasmic domain translocates into the nucleus. THBS4 promotes its nuclear shuttling.

Database links: SwissProt: P18850 Human

Recommended Dilutions:

WB	1:500-1:1,000
IF-Cell	1:50-1:200
IHC-P	1:50-1:200
FC	1:50-1:100

Storage Buffer: 1*PBS (pH7.4), 0.2% BSA, 50% Glycerol. Preservative: 0.05% Sodium Azide.

Storage Instruction: Shipped at 4℃. Store at +4℃ short term (1-2 weeks). It is recommended to aliquot into single-use upon delivery. Store at -20℃ long term.

Purity: Protein A affinity purified.

Images

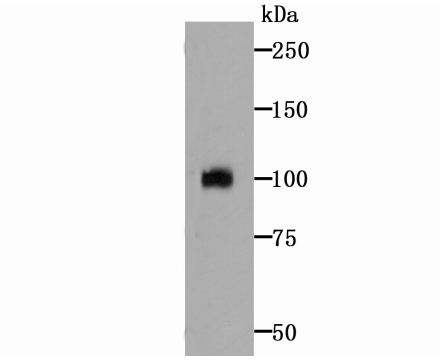

Fig1: Western blot analysis of ATF6 on Hela cell lysate using anti-ATF6 antibody at 1/500 dilution.

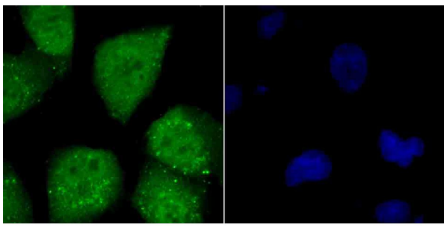

Fig2: ICC staining ATF6 in HUVEC cells (green). The nuclear counter stain is DAPI (blue). Cells were fixed in paraformaldehyde, permeabilised with 0.25% Triton X100/PBS.

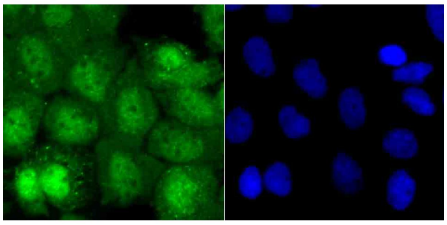

Fig3: ICC staining ATF6 in A431 cells (green). The nuclear counter stain is DAPI (blue). Cells were fixed in paraformaldehyde, permeabilised with 0.25% Triton X100/PBS.

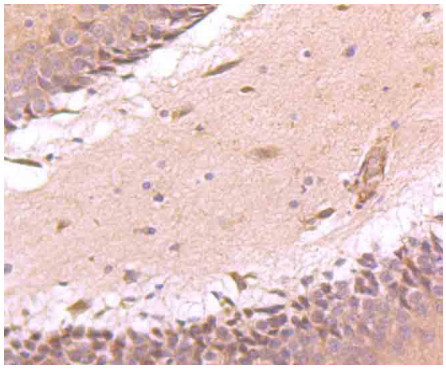

Fig4: Immunohistochemical analysis of paraffin-embedded rat brain tissue using anti-ATF6 antibody. Counter stained with hematoxylin.

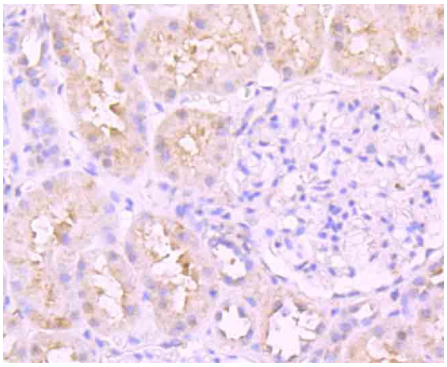

Fig5: Immunohistochemical analysis of paraffin-embedded human kidney tissue using anti-ATF6 antibody. Counter stained with hematoxylin.

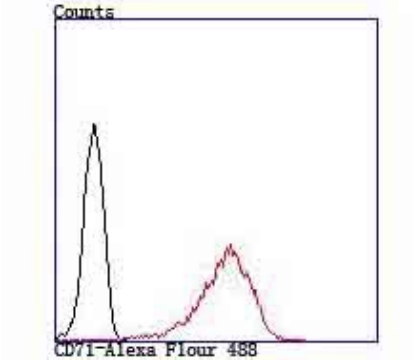

Fig6: Flow cytometric analysis of K562 cells with Thioredoxin antibody at 1/100 dilution (red) compared with an unlabelled control (cells without incubation with primary antibody; black). Alexa Fluor 488-conjugated goat anti rabbit IgG was used as the secondary antibody

Note: All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE".

Background References

1. Jiang M et al. Regulation of PERK-eIF2a signalling by tuberous sclerosis complex-1 controls homoeostasis and survival of myelinating oligodendrocytes. Nat Commun 7:12185 (2016).
2. Gupta A et al. NCOA3 coactivator is a transcriptional target of XBP1 and regulates PERK-eIF2a-ATF4 signalling in breast cancer. Oncogene 35:5860-5871 (2016).