SunLong Biotech Co.,LTD
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[Primary Antibody]

Rabbit Anti-ATF6 antibody

Catalog Number: SL23093R

FOR RESEARCH USE ONLY

[DATASHEET]

Host:	Rabbit
Isotype:	IgG
Clonality:	Polyclonal
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℃. Store at -20 °C for one year. Avoid repeated freeze/thaw cycles.
Applications:	WB=1:500-2000 IHC-P=1:100-500 IHC-F=1:100-500 IF=1:100-500 （Paraffin sections need antigen repair） not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Reactivity:	Human, Mouse, Rat, (predicted: Dog, Pig, Cow, Horse, Rabbit, Sheep)
Predicted MW.:	75kDa
Subcellular Location:	The nucleus
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

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	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. **Function:** Transcription factor that acts during endoplasmic reticulum stress by activating unfolded protein response target genes. 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. Could also be involved in activation of transcription by the serum response factor. **Subunit:** 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). Interacts also with the transcription factors GTF2I, YY1 and SRF. **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. **Tissue Specificity:** Ubiquitous. **Post-translational modifications:** During unfolded protein response an approximative 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. N-glycosylated. The glycosylation status may serve as a sensor for ER homeostasis, resulting in ATF6 activation to trigger the unfolded protein response (UPR). Phosphorylated in vitro by MAPK14/P38MAPK. **Similarity:** Belongs to the bZIP family. ATF subfamily. Contains 1 bZIP (basic-leucine zipper) domain. **Database links:** **Entrez Gene:** 22926 Human **Entrez Gene:** 226641 Mouse **Entrez Gene:** 304962 Rat Omim: 605537 Human **SwissProt:** P18850 Human **Unigene:** 492740 Human

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[VALIDATION IMAGES]

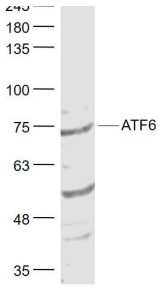


Figure 1. Sample: K562(Human) Cell Lysate at 30 ug Primary: Anti- ATF6 (SL23093R) at 1/1000 dilution Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution Predicted band size: 75 kD Observed band size: 75 kD

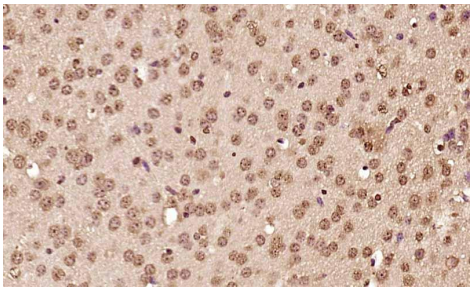


Figure 2. Paraformaldehyde-fixed, paraffin embedded (Mouse brain); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (ATF6) Polyclonal Antibody, Unconjugated (SL23093R) at 1:400 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructionsand DAB staining

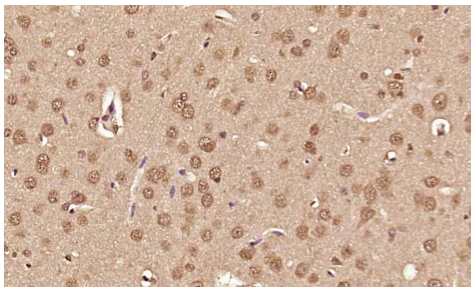


Figure 3. Paraformaldehyde-fixed, paraffin embedded (Rat brain); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (ATF6) Polyclonal Antibody, Unconjugated (SL23093R) at 1:400 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructionsand DAB staining

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