

Anti-ATF6 Rabbit mAb

Purified Recombinant Rabbit Monoclonal Antibody

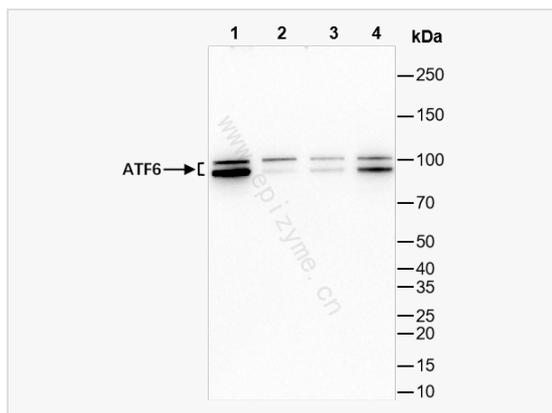
Catalog # R012327

Product Information

Application	ELISA, WB, IF (Cell)/ICC
Reactivity	Human
Dilution	WB 1:1,000~1:2,000; IF 1:100~1:200
Host	Rabbit
Clonality	Monoclonal
Clone No.	50K63M04
Isotype	IgG
Label	Unconjugated
Immunogen	Recombinant protein of human ATF6
Format	Affinity purified monoclonal antibody supplied in PBS with 0.01% sodium azide and 50% glycerol, pH 7.3.
Storage	Shipped on wet ice. Store at -20°C. Stable for 24 months from date of receipt. Aliquoting is unnecessary for -20°C storage.
Precautions	Anti-ATF6 Rabbit mAb [50K63M04] is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Synonyms	Activating transcription factor 6 alpha, Activating transcription factor 6, ATF 6, ATF6 alpha, ATF6, ATF6-alpha, ATF6A, ATF6A_HUMAN, cAMP dependent transcription factor ATF 6 alpha, cAMP-dependent transcription factor ATF-6 alpha, Cyclic AMP dependent transcription factor ATF 6 alpha, DKFZp686P2194, ESTM49, FLJ21663, Processed cyclic AMP dependent transcription factor ATF 6 alpha, Processed cyclic AMP-dependent transcription factor ATF-6 alpha.
Calculated MW	Calculated MW: 75 kDa; Observed MW: 90-100 kDa
Uniprot ID	P18850
Gene ID	22926
Background	This gene encodes a transcription factor that activates target genes for the unfolded protein response (UPR) during endoplasmic reticulum (ER) stress. Although it is a transcription factor, this protein is unusual in that it is synthesized as a transmembrane protein that is embedded in the ER. It functions as an ER stress sensor/transducer, and following ER stress-induced proteolysis, it functions as a nuclear transcription factor via a cis-acting ER stress response element (ERSE) that is present in the promoters of genes encoding ER chaperones. This protein has been identified as a survival factor for quiescent but not proliferative squamous carcinoma cells. There have been conflicting reports about the association of polymorphisms in this gene with diabetes in different populations, but another polymorphism has been associated with increased plasma cholesterol levels. This gene is also thought to be a potential therapeutic target for cystic fibrosis. [provided by RefSeq, Aug 2011]
Cellular Location	Endoplasmic reticulum membrane and Nucleus. Under ER stress the cleaved N-terminal cytoplasmic domain translocates into the nucleus.



Western Blot - Anti-ATF6 Rabbit mAb [50K63M04]

All lanes: R012327 at 1:1,000 dilution

Lane 1: HeLa (Human cervix adenocarcinoma epithelial cell) whole cell lysates

Lane 2: HepG2 (Human hepatocarcinoma epithelial cell) whole cell lysates

Lane 3: HCT116 (Human colorectal carcinoma epithelial cell) whole cell lysates

Lane 4: A431 (Human epidermoid teratoma cell line) whole cell lysates

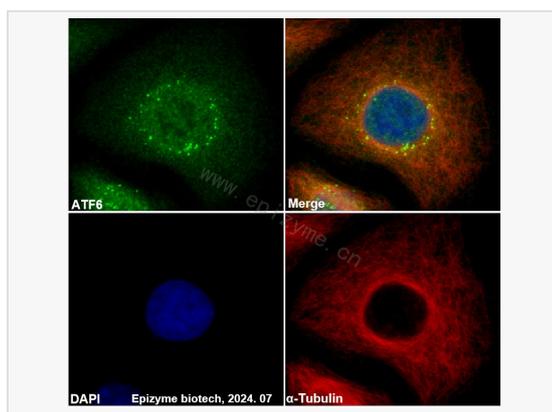
Lysates/proteins at 10 µg per lane.

Secondary antibody: Goat Anti-Rabbit IgG(H+L), HRP Conjugated (Cat. No. LF102) at 1:5,000 dilution

Predicted band size: 75 kDa

Observed band size: 90-100 kDa

Developed using the ECL technique (Cat. No. SQ201).



Immunofluorescence - Anti-ATF6 Rabbit mAb [50K63M04]

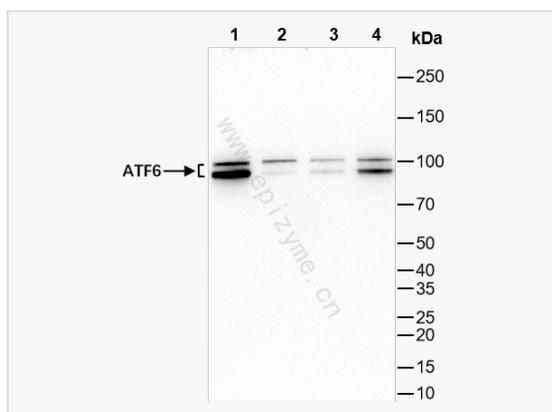
Sample: HeLa cells

The cells were fixed with 4% paraformaldehyde (10 min), permeabilized with 0.5% Triton X-100 for 10 minutes and then blocked with 5% BSA in 0.1% PBS-Tween for 0.5 hours.

Primary antibodies: R012327 at 1:100 dilution and α -tubulin Mouse Monoclonal Antibody (Cat. No. LF209) at 1:100 dilution

Secondary antibodies: Goat anti-Rabbit (488) at 1:1,000 dilution (shown in green) and Goat anti-Mouse (555) at 1:1,000 dilution (shown in red)

Nuclei were stained with DAPI (shown in blue).



Western blot analysis of extracts from HeLa and U87MG cells, treated or none treated with 2 µg/mL tunicamycin. ATF6 expression was detected.

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).