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ATF6 Antibody

Catalog # ASC10390

Product Information

Application	WB, ICC, E
Primary Accession	P18850
Other Accession	NP_031374, 56786157
Reactivity	Human, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	74585
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	ATF6 antibody can be used for the detection of ATF6 by Western blot at 0.5 - 1 □g/mL. Antibody can also be used for immunocytochemistry starting at 10 □g/mL.

Additional Information

Gene ID	22926
Other Names	ATF6 Antibody: ATF6A, Cyclic AMP-dependent transcription factor ATF-6 alpha, Activating transcription factor 6 alpha, cAMP-dependent transcription factor ATF-6 alpha, activating transcription factor 6
Target/Specificity	ATF6;
Reconstitution & Storage	ATF6 antibody can be stored at 4℃ for three months and -20℃, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.
Precautions	ATF6 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

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..

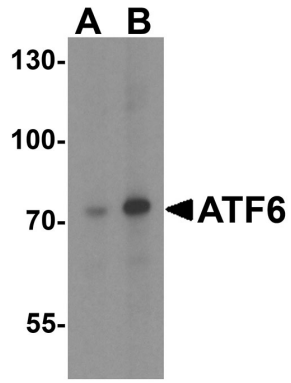
Background

ATF6 Antibody: Disruptions of protein folding and maturation in the endoplasmic reticulum (ER) result in the activation of the unfolded protein response (UPR), an integrated cellular signaling pathway that transmits information from the ER lumen to the cytoplasm and nucleus. Activating transcription factor 6 (ATF6) as well as the ER-transmembrane protein kinases IRE1p and PERK are the major transducers of the UPR. ATF6 is an ER transmembrane protein that is normally bound to the ER chaperone GRP78, but upon ER stress is released from GRP78 and proteolytically cleaved to yield a cytosolic fragment which then migrates to the nucleus, and together with the transcription factor XBP-1, activates transcription of UPR-responsive genes. ATF6 has two isoforms (ATF6α and ATF6β); only ATF6α is recognized by this antibody.

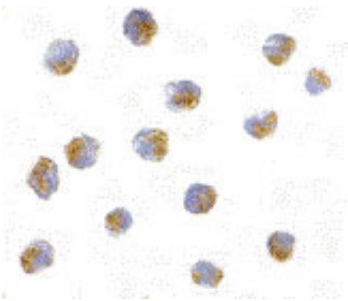
References

Liu CY and Kaufman RJ. The unfolded protein response. J. Cell Sci. 2003; 1861-2.
Haze K, Yoshida H, Yanagi H, et al. Mammalian transcription factor ATF6 is synthesized as a transmembrane protein and activated by proteolysis in response to endoplasmic stress. Mol. Cell. Biol. 1999; 10:3787-99.
Little E, Ramakrishnan M, Roy B, et al. The glucose-regulated proteins (GRP78 and GRP94): functions, gene regulation, and applications. Crit. Rev. Eukaryot. Gene Expr. 1994; 4:1-18.
Yoshida H, Matsui T, Yamamoto T, et al. XBP1 mRNA is induced by ATF6 and spliced by IRE1p in response to ER stress to produce a highly active transcription factor. Cell 2001; 107:881-91.

Images



Western blot analysis of ATF6 in MCF7 cell lysate with ATF6 antibody at (A) 1 and (B) 2 µg/mL.



Immunocytochemistry of ATF6 in A20 with ATF6 antibody at 10 µg/mL.