Product Datasheet

ATF6 Antibody (70B1413.1) - BSA Free
NBP1-40256SS

Unit Size: 0.025 mg

Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.

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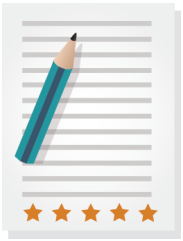
Updated 12/5/2024 v.20.1



NBP1-40256SS

ATF6 Antibody (70B1413.1) - BSA Free

Product Information

Unit Size	0.025 mg
Concentration	1.0 mg/ml
Storage	Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.
Clonality	Monoclonal
Clone	70B1413.1
Preservative	0.05% Sodium Azide
Isotype	IgG1 Kappa
Purity	Protein G purified
Buffer	TBS

Product Description

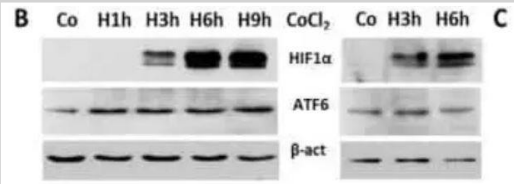
Description	(1) The ATF6 (IMG-273) has been cited to recognize both full-length and cleaved forms of ATF6. Please refer to the references in the Product Citation list for more comprehensive information. (2) The ATF6 transfected cell lysate (40210) is recommended as a useful western blot positive control to run in parallel with your experimental samples. (3) Active/cleaved forms of ATF6 are generated through proteolytic cleavage during ER stress. Different molecular weights have been described for cleaved forms. A sample protocol was first described in Luo and Lee (2002) wherein NIH3T3 cells were treated with the amino acid analogue azetidine (AzC), and full-length and cleaved forms ATF6 were detected with IMG-273. The results show that in addition to the major 90 kDa full length ATF6, protein bands over the range of 50-70 kDa were detectable following AzC treatment (Luo and Lee, 2002: Figure 4A, page 791). Many protocols and other cleaved forms have been described since, please consult the literature for additional information. (4) For immunofluorescence microscopy, cells were fixed in methanol at -20 degrees C (Thomas et al, 2005). Thomas et al used immunofluorescence to identify ATF6 with IMG-273 in the nucleus. (5) The active/cleaved 50 kDa nuclear form of ATF6 using IMG-273 has been found to be strongly expressed in certain tumor cell lines derived from B cell lymphoma (DEL), primary effusion lymphoma [BC-3 (ATCC CRL-2277), PEL-SY, HBL-6], lymphoblastic leukemia (DS-1) and multiple myeloma (RPMI-8226, NCI-H929), (Jenner et al. 2003). (6) Cleaved 60 and 36 kDa ATF6 forms have also been described in the nucleus (Mao et al, 2007). (7) The ATF6 antibody is reported to be specific for ATF6a, recognizing ATF6a but not ATF6b (Bommiasamy et al, 2009). (8) In western blots, the binding pattern of ATF6 may vary. Researchers are encouraged to consult the body of literature citing the ATF6 IMG-273 antibody (see Product citation list) for additional information. General ATF6 literature is also helpful. For example, Yoshida (1998) show a multiple band pattern in HeLa in both untreated and stressed cells (Fig 11B). In this early landmark ATF6 publication, multiple bands were seen between the 66 and 116 kDa markers as well as one or more bands between the 45 and 66 kDa markers. (9) We highly recommend the use of a maximum sensitivity ECL substrate (Femto sensitive) for efficient detection of this antibody in Western blot applications.
Host	Mouse
Gene ID	22926
Gene Symbol	ATF6
Species	Human, Mouse, Rat, Porcine, Plant, Rabbit
Reactivity Notes	Plant reactivity reported in scientific literature (PMID: 31531232). Use in Plant reported in scientific literature (PMID:31531232).
Specificity/Sensitivity	This ATF6 antibody detects both the full length and the cleaved/active protein.
Immunogen	This monoclonal antibody was made against a partial protein containing amino acids 1-273 of human ATF6.

Product Application Details

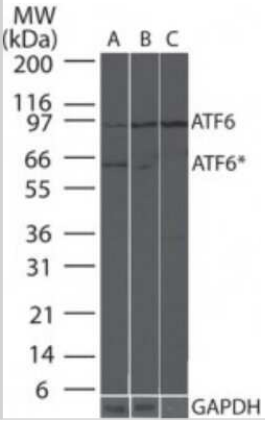
Applications	Western Blot, Flow Cytometry, Flow (Intracellular), Immunoblotting, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Frozen, Immunohistochemistry-Paraffin, Immunoprecipitation, Chromatin Immunoprecipitation (ChIP), CyTOF-ready, Knockout Validated
Recommended Dilutions	Western Blot 1-5 ug/ml, Flow Cytometry 1 ug per million cells, Immunohistochemistry 1:10-1:500, Immunocytochemistry/ Immunofluorescence 1:10-1:500, Immunoprecipitation 1:10-1:500, Immunohistochemistry-Paraffin 1:50, Immunohistochemistry-Frozen 1:10-1:500, Immunoblotting, Flow (Intracellular), Chromatin Immunoprecipitation (ChIP) 1:10-1:500, CyTOF-ready, Knockout Validated
Application Notes	ICC: See Thomas et al (2005) and Kikuchi et al (2006) for details. Immunohistochemistry (Frozen): See Zhu et al (2008) for details. Immunohistochemistry (Paraffin): See van Kollenburg et al (2006) for details. Immunoprecipitation: See Hong et al, 2004 for details. Use in Immunoblotting reported in scientific literature (PMID 28550308). Knockout validation (PMID: 31531232). In Western blot do not use milk in the diluent as it can inhibit the observed signal. This antibody is CyTOF ready.

Images

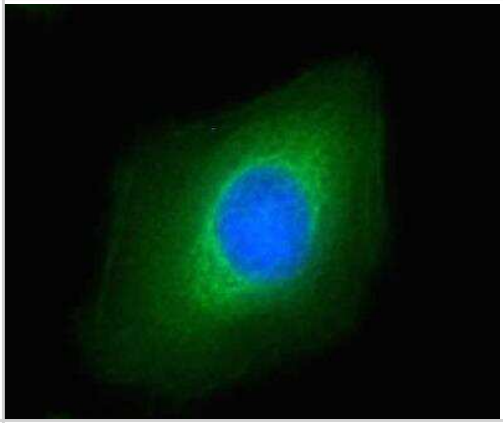
Western Blot: ATF6 Antibody (70B1413.1) [NBP1-40256] - Hypoxia leads to EMT and ER-stress in CRC cells. B. C. Confluent growing SW480 (B) and HCT116 (C) cells were cultured under conditions of normoxia or hypoxia-like conditions (serum free; 100 uM CoCl2, 1-9 h. B-actin (B-act) as loading control. HIF1a was detectable after 3 h of CoCl2 incubation, the amount of the 50 kD-ATF6 fragment, was already enhanced after 1 h of addition of CoCl2. Image collected and cropped by CiteAb from the following publication (//doi.org/10.1371/journal.pone.0087386) licensed under a CC-BY license.



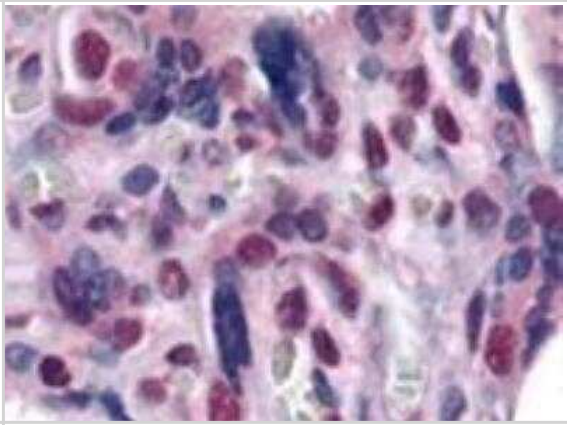
Western Blot: ATF6 Antibody (70B1413.1) [NBP1-40256] - Analysis of ATF6 in mouse liver tissue using 3 ug/ml of ATF6 antibody and 0.25 ug/ml of GAPDH antibody. Lane A contains 20 ugs of whole mouse liver lysate, lane B contains 20 ugs of total ER fraction, and lane C contains 20 ugs of rough ER fraction. The ATF6 band may represent under glycosylated or cleaved/active ATF6.



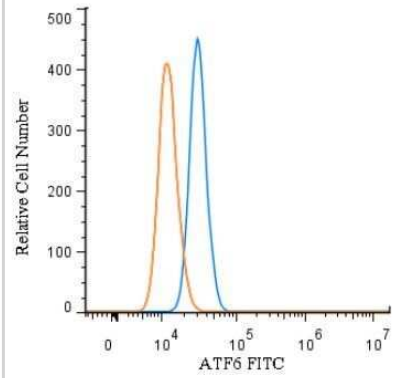
Immunocytochemistry/Immunofluorescence: ATF6 Antibody (70B1413.1) [NBP1-40256] - Untreated HeLa cells were fixed in -20C methanol for 10 min, air dried and rehydrated in PBS at room temperature for 5 minutes. Cells were incubated with anti-ATF6 (1:20) for one hour at room temperature. ATF6 reactivity (green) was detected with anti-mouse Dylight-488 secondary antibody. Nuclei were counterstained with DAPI (blue). Note the ER localization of ATF6.



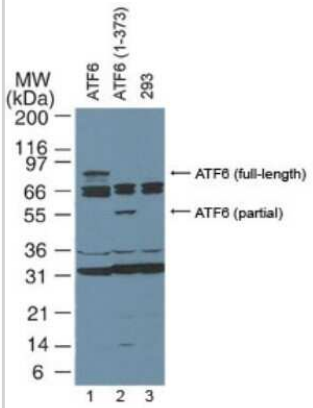
Immunohistochemistry-Paraffin: ATF6 Antibody (70B1413.1) [NBP1-40256] - Analysis of ATF6 antibody on Human placenta. Fixed paraffin-embedded sections. Antibody dilution 1:50. Incubated overnight in 4C. Image from verified customer review.

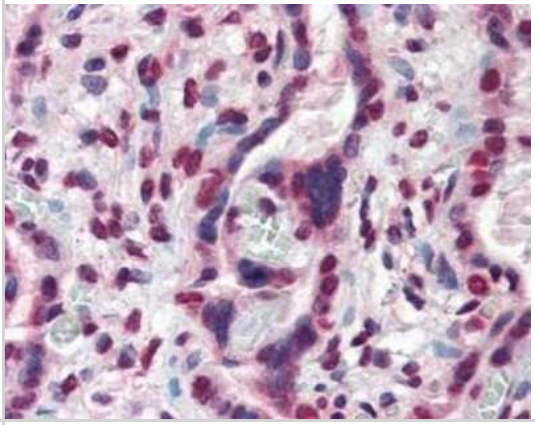
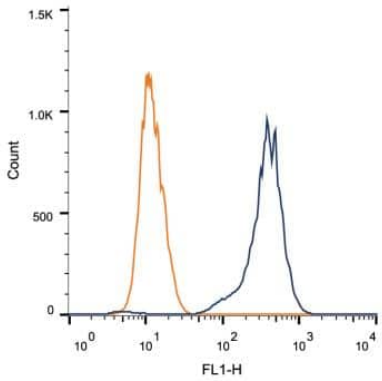
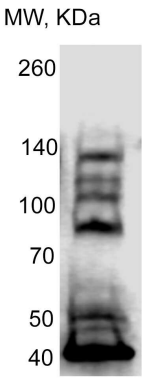
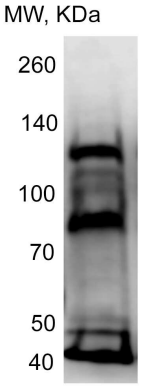


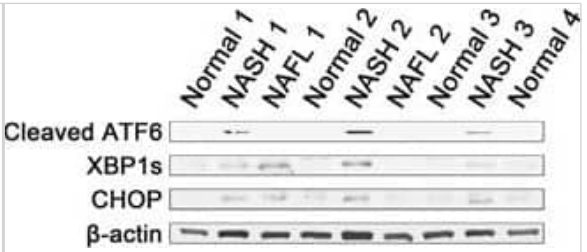
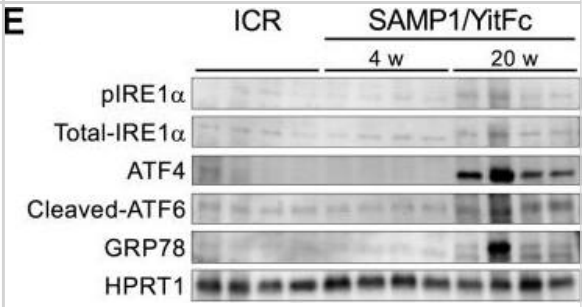
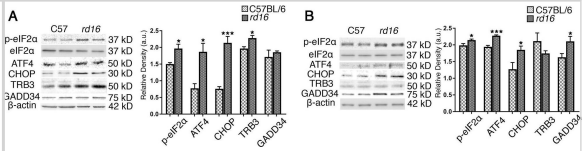
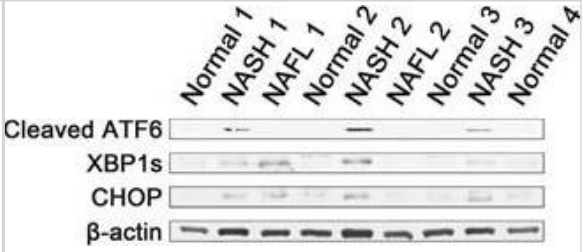
Flow (Intracellular): ATF6 Antibody (70B1413.1) [NBP1-40256] - An intracellular stain was performed on HeLa cells with ATF6 Antibody (70B1413.1) NBP1-40256F (blue) and a matched isotype control (orange). Cells were fixed with 4% PFA and then permeablized with 0.1% saponin. Cells were incubated in an antibody dilution of 10 ug/mL for 30 minutes at room temperature. Both antibodies were conjugated to FITC.. Using the FITC format of this antibody.



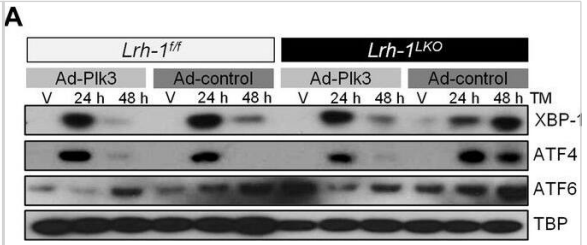
Western Blot: ATF6 Antibody (70B1413.1) [NBP1-40256] - Lane 1: 293 cells transfected with full-length ATF6.
Lane 2: 293 cells transfected with partial length ATF6 (amino acids 1-373).
Lane 3: Untransfected 293 cells.
Western blots were probed with 4 ug/ml of the ATF6 monoclonal antibody and visualized with PicoTect Western Blot Chemiluminescence Substrate (10087K). Film was exposed for 1 min. The top arrow corresponds to the 90 kDa form of ATF6 described as full-length in the literature. The human full-length and partial length ATF6 plasmids are described in Luo and Lee (2002).



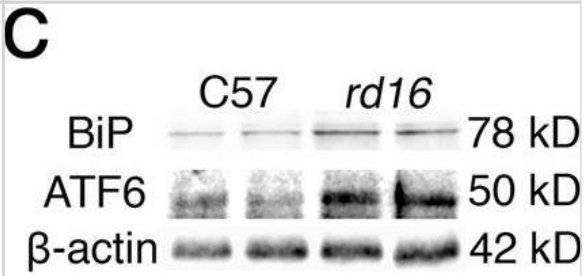
Immunohistochemistry-Paraffin: ATF6 Antibody (70B1413.1) [NBP1-40256] - Human placenta, followed by biotinylated horse anti-mouse IgG secondary antibody, alkaline phosphatase-streptavidin and chromogen. Dilution 10ug/ml	
Flow Cytometry: ATF6 Antibody (70B1413.1) [NBP1-40256] - Intracellular flow cytometric staining of 1 x 10^6 MCF-7 cells using ATF6 antibody (dark blue). Isotype control shown in orange. An antibody concentration of 1 ug/1x10^6 cells was used.	
Western Blot: ATF6 Antibody (70B1413.1) [NBP1-40256] - Lysate of DU145 cells. Image from verified customer review.	
Western Blot: ATF6 Antibody (70B1413.1) [NBP1-40256] - Lysate of PC-3 cells. Image from verified customer review.	

Expression of ER stress-associated transcription factors in NASH, NAFL and normal liver tissuesβ-Actin was used as an internal control. Horizontal lines represent means of densitometry signals from the western blot analyses for all tissue groups. #, significant differences in signals between NASH and normal liver tissues (P < 0.05). Data for NAFL tissues were not used for statistical comparisons because of limited sample number (n = 2).	
Abnormal Paneth cells show ER stress.(A, B) Representative transmission electron microscopy images of Paneth cells at the base of ileal crypts in (A) ICR & (B) SAMP1/YitFc mice. Scale bars indicate 2 µm. (C, D) Quantitative analysis of (C) granule number & (D) ER lumen diameter in Paneth cells (n = 3/each week for SAMP1/YitFc mice). For the measurements, three Paneth cells were randomly selected from each mouse. (E) SDS–PAGE Western blot analysis of ER stress markers, pIRE1α, ATF4, cleaved-ATF6, & GRP78 in ileal crypts (n = 4/each group). Total-IRE1α & HPRT1 was used as loading control. (F) Relative expression level of ER stress markers calculated from the band intensity. Error bars represent mean ± SEM. (C, D, F) Statistical significance was evaluated by t test in (C, D), & one-way ANOVA followed by Tukey's post hoc test in (F). P < 0.05 was considered statistically significant. *P < 0.05, †P < 0.01, §P < 0.001. E, ER; G, granules; N, nucleus; n.s., not significant. Image collected & cropped by CiteAb from the following publication (https://pubmed.ncbi.nlm.nih.gov/32345659), licensed under a CC-BY license. Not internally tested by Novus Biologicals.	
Western Blot: ATF6 Antibody (70B1413.1) - BSA Free [NBP1-40256] - The ISR is active in the retinas of rd16 mice.Western blots & corresponding graphs of ISR markers in the retinas of rd16 mice at P15 (a) & P20 (b). At P15, p-eIF2α, ATF4, CHOP, & TRB3 are significantly elevated. At P20, levels of p-eIF2α, ATF4, CHOP, & GADD34 are increased. Markers of the UPR are elevated in rd16 retinas. BiP & cleaved (~50 kD) ATF6 are upregulated in the retinas of rd16 mice at P15 (c) & P20 (d). Relative density measurements correspond to the intensities of the immunoblotting bands or lanes normalized to an internal control. Data are shown as mean ± SEM. a.u. arbitrary units. P15 n = 3. P20 n = 4. *p < 0.05, **p < 0.01, ***p < 0.001 Image collected & cropped by CiteAb from the following publication (https://pubmed.ncbi.nlm.nih.gov/29706649), licensed under a CC-BY license. Not internally tested by Novus Biologicals.	
Western Blot: ATF6 Antibody (70B1413.1) - BSA Free [NBP1-40256] - Expression of ER stress-associated transcription factors in NASH, NAFL & normal liver tissuesβ-Actin was used as an internal control. Horizontal lines represent means of densitometry signals from the western blot analyses for all tissue groups. #, significant differences in signals between NASH & normal liver tissues (P < 0.05). Data for NAFL tissues were not used for statistical comparisons because of limited sample number (n = 2). Image collected & cropped by CiteAb from the following publication (https://pubmed.ncbi.nlm.nih.gov/28968997), licensed under a CC-BY license. Not internally tested by Novus Biologicals.	

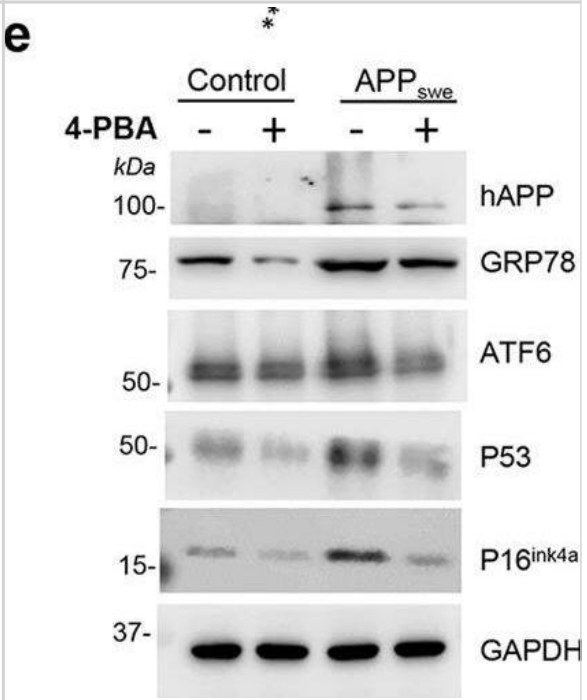
Western Blot: ATF6 Antibody (70B1413.1) - BSA Free [NBP1-40256] - Restoration of Plk3 induction rescues ATF2 phosphorylation & ER stress resolution in Lrh-1LKO mice, & loss or gain of ATF2 transcriptional activity also alters ER stress resolution capacity.(A) Primary hepatocytes prepared from Lrh-1f/fand Lrh-1LKO mice & transduced with Ad-Plk3 or Ad-control at a MOI of 100. Cells treated 36 hr later with vehicle or tunicamycin (TM) (0.01 µg/ml) & doxycycline (1 µg/ml) to induce Plk3 or LacZ control. Nuclear protein was obtained at timepoints indicated & immunoblotted for UPR transcription factors, with TBP as a loading control. Results representative of 3 independent experiments. Image collected & cropped by CiteAb from the following publication (https://elifesciences.org/articles/01694), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



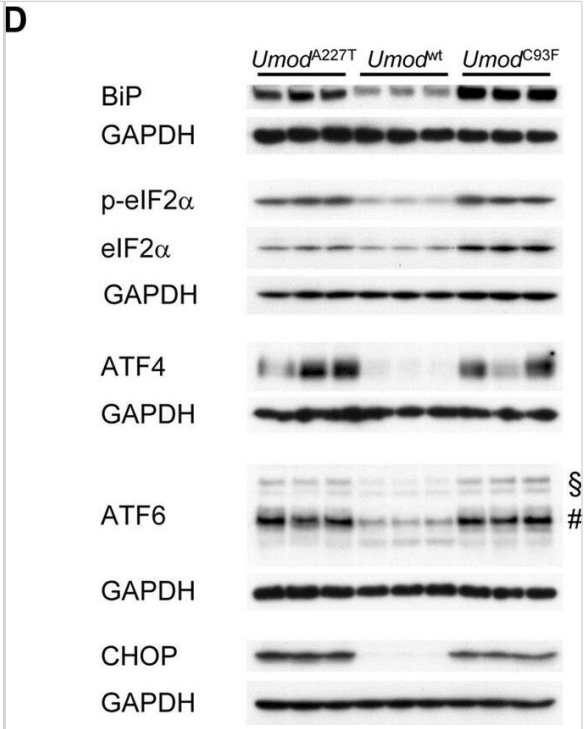
Western Blot: ATF6 Antibody (70B1413.1) - BSA Free [NBP1-40256] - The ISR is active in the retinas of rd16 mice.Western blots & corresponding graphs of ISR markers in the retinas of rd16 mice at P15 (a) & P20 (b). At P15, p-eIF2α, ATF4, CHOP, & TRB3 are significantly elevated. At P20, levels of p-eIF2α, ATF4, CHOP, & GADD34 are increased. Markers of the UPR are elevated in rd16 retinas. BiP & cleaved (~50 kD) ATF6 are upregulated in the retinas of rd16 mice at P15 (c) & P20 (d). Relative density measurements correspond to the intensities of the immunoblotting bands or lanes normalized to an internal control. Data are shown as mean ± SEM. a.u. arbitrary units. P15 n = 3. P20 n = 4. *p < 0.05, **p < 0.01, ***p < 0.001 Image collected & cropped by CiteAb from the following publication (https://pubmed.ncbi.nlm.nih.gov/29706649), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



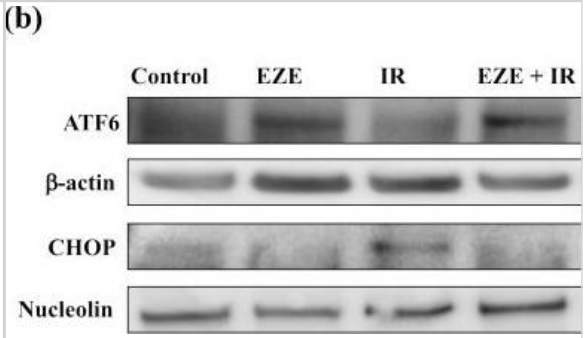
Western Blot: ATF6 Antibody (70B1413.1) - BSA Free [NBP1-40256] - APPswe induction of OB-senescence via ER stress.a Heat map of differentially expressed ER stress or anti-stress related genes identified by RNA-seq in control (OCN-Cre; Ai9) & TgAPPsweOCN; Ai9 Td+ OB-progenitors (detail analysis was described in Methods). b RT-PCR analysis of ER stress-related genes Grp78, Atf6, Hsp90b1, Eif2ak3, Ern1, Hsp90aa1, & Hspa2 & anti-stress related gene Sirt3 gene expression in purified Td+ BMSCs from 6-MO control (OCN-Cre; Ai9) & TgAPPsweOCN; Ai9 mice, *p < 0.05, **p < 0.01, ***p < 0.001, mean ± SD, n = 3, Mann–Whitney U test. c Western blot analysis of indicated protein expression in BMSCs from mice with indicated genotypes (at 6-MO). GAPDH was used as a loading control. d Quantification of data in c, *p < 0.05, **p < 0.01. mean ± SD, n = 4, Student's t test. e Western blot analysis of indicated protein expression in BMSCs from 6-MO control & TgAPPsweOCN with or without 0.25 mM 4-PBA (4-Phenylbutyric acid) treatment. f Quantification analyses of the data in e, *p < 0.05, n = 3. g SA-β-gal staining of 6-MO control & TgAPPsweOCN BMSCs with vehicle (Veh)(PBS) & 4-PBA treatment, respectively, scale bar, 20 µm. h Quantification of SA-β-gal+ cell densities in g (mean ± SD; n = 5, **p < 0.01, ***p < 0.001). Two-way analysis of variance test was used in f & h. Image collected & cropped by CiteAb from the following publication (https://pubmed.ncbi.nlm.nih.gov/34824365), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



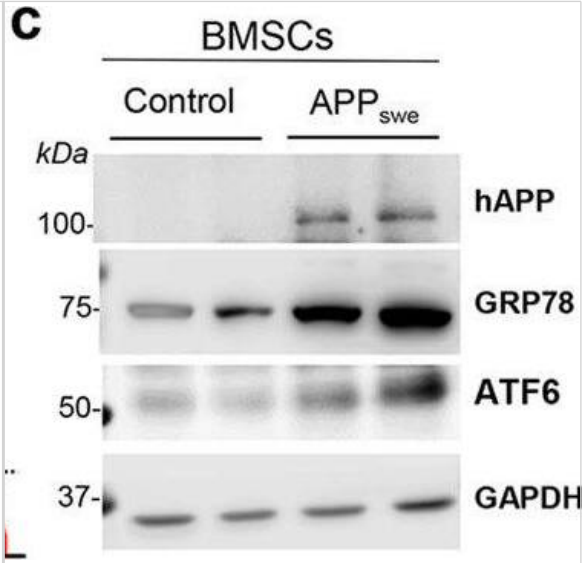
Western Blot: ATF6 Antibody (70B1413.1) - BSA Free [NBP1-40256] - Disturbance of ER homeostasis in ADTKD-UMOD.(A) ADTKD-UMOD is characterized by maturation & trafficking defect of mutant UMOD & intracellular accumulation of UMOD in TAL cells. UMOD immunolocalization revealed a diffuse cytoplasmic staining with enforcement of the luminal membrane in TAL cells of a wild-type mouse. In contrast, TAL cells of an UmodC93F mutant mouse displayed a strong paranuclear immunopositivity for UMOD. Wild-type: Umodwt mouse; UmodC93F: homozygous UmodC93F mutant mouse. Age of mice analysed: four months. Chromogen: DAB, nuclear staining: haemalum. (B) Heat map of relative expression values (z scores) showed differential abundance of several proteins localized in the ER. (C) In the outer medulla of Umod mutant mice of both mouse lines, a strong accumulation of immature UMOD was present. (D) Protein abundances of BiP, phospho-eIF2α, eIF2α, ATF4, both full-length (§) & cleaved activated (#) ATF6, & CHOP were increased in Umod mutant mice compared to wild-type mice. Signal intensities were corrected for GAPDH signal intensities of the same PVDF-membrane, which was stripped several times to facilitate the detection of multiple proteins. Mean of protein abundance of wild-type mice was set on a value of 1 [mean (wild-type) = 1]. Data are shown as means ± SD. One-way ANOVA with Newman-Keuls's post hoc test: p vs. wild-type, *p < 0.05; **p < 0.01; ***p < 0.001. Image collected & cropped by CiteAb from the following publication (https://www.nature.com/articles/srep42970), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



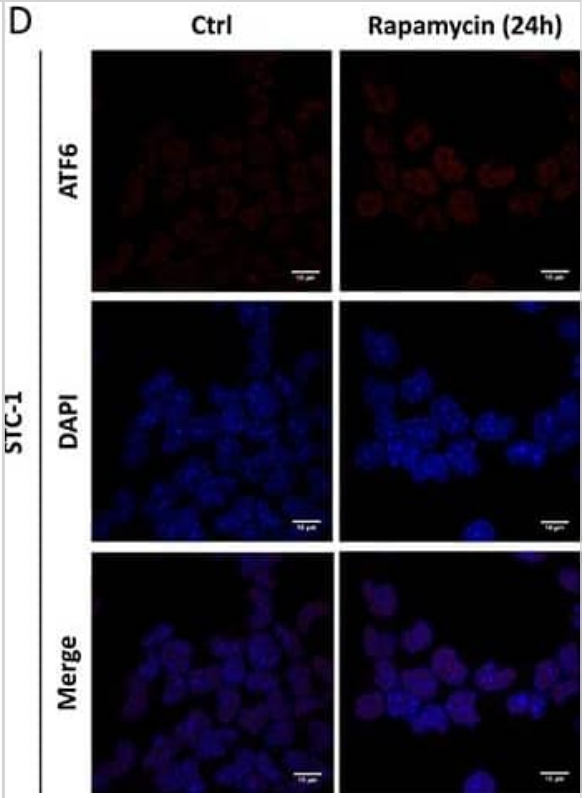
Western Blot: ATF6 Antibody (70B1413.1) - BSA Free [NBP1-40256] - The effect of Ezetimibe on unfolded protein response (UPR) gene expression in THP-1 cells exposed to ischemia-reperfusion (IR). (a) The mRNA expression of activating transcription factor 6 (ATF6) & CCAAT-enhancer-binding protein homologous protein (CHOP). (b) Representative Western blot analyses for the indicated proteins. (c,d) The average quantification of ATF6 & CHOP obtained by the densitometric analysis of three independent experiments. mRNA was analyzed by quantitative real-time PCR; normalized gene expression levels are given as the ratio between the mean value for the target gene & that for β-actin in each sample. Data are expressed as mean ± SD. * p < 0.01 vs. control (up-regulation); ** p < 0.01 vs. IR; §p < 0.01 vs. control (down-regulation). Image collected & cropped by CiteAb from the following publication (https://pubmed.ncbi.nlm.nih.gov/32340270), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



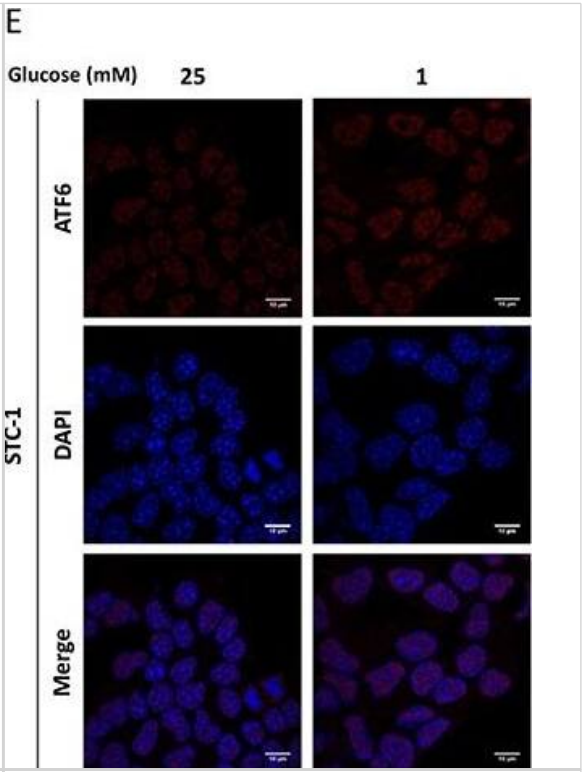
Western Blot: ATF6 Antibody (70B1413.1) - BSA Free [NBP1-40256] - APPswe induction of OB-senescence via ER stress.a Heat map of differentially expressed ER stress or anti-stress related genes identified by RNA-seq in control (OCN-Cre; Ai9) & TgAPPsweOCN; Ai9 Td+ OB-progenitors (detail analysis was described in Methods). b RT-PCR analysis of ER stress-related genes Grp78, Atf6, Hsp90b1, Eif2ak3, Ern1, Hsp90aa1, & Hspa2 & anti-stress related gene Sirt3 gene expression in purified Td+ BMSCs from 6-MO control (OCN-Cre; Ai9) & TgAPPsweOCN; Ai9 mice, *p < 0.05, **p < 0.01, ***p < 0.001, mean ± SD, n = 3, Mann–Whitney U test. c Western blot analysis of indicated protein expression in BMSCs from mice with indicated genotypes (at 6-MO). GAPDH was used as a loading control. d Quantification of data in c, *p < 0.05, **p < 0.01. mean ± SD, n = 4, Student's t test. e Western blot analysis of indicated protein expression in BMSCs from 6-MO control & TgAPPsweOCN with or without 0.25 mM 4-PBA (4-Phenylbutyric acid) treatment. f Quantification analyses of the data in e, *p < 0.05, n = 3. g SA-β-gal staining of 6-MO control & TgAPPsweOCN BMSCs with vehicle (Veh)(PBS) & 4-PBA treatment, respectively, scale bar, 20 μm. h Quantification of SA-β-gal+ cell densities in g (mean ± SD; n = 5, **p < 0.01, ***p < 0.001). Two-way analysis of variance test was used in f & h. Image collected & cropped by CiteAb from the following publication (https://pubmed.ncbi.nlm.nih.gov/34824365), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



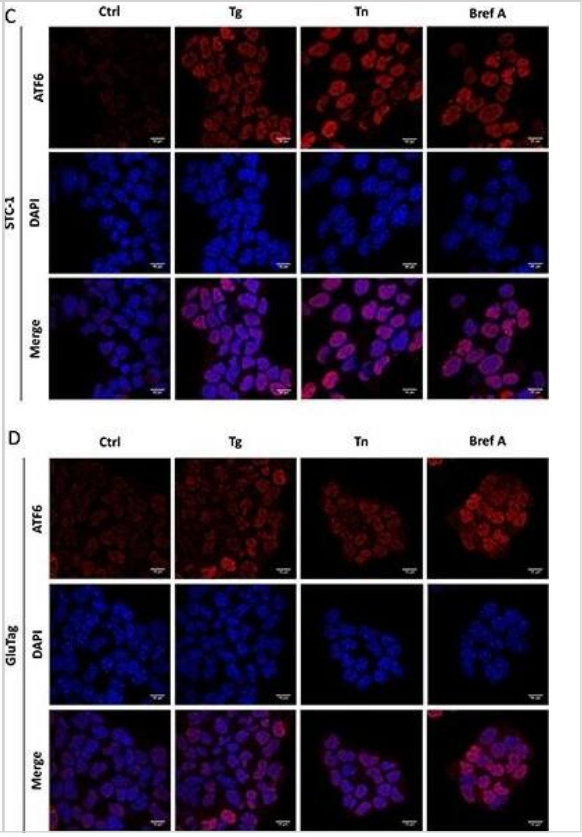
Immunocytochemistry/ Immunofluorescence: ATF6 Antibody (70B1413.1) - BSA Free [NBP1-40256] - Effect of rapamycin on markers of the UPR pathways(A) Cells were incubated in medium alone (0.05% FBS), with 3 nM IGF-1 or with both 3 nM IGF-1 & 10 nM rapamycin (IGF-1 + rapamycin). Total protein extracts prepared from cells incubated for 24 h in those conditions were subjected to Western Blot analysis. Protein expression levels were assessed for phosphorylated or total forms of PERK, eIF2α & for CHOP, BiP, XBP1-s & XBP1-u proteins. Efficiency of rapamycin to inhibit mTORC1 pathway was also checked by immunoblot with phosphorylated & total forms of p70S6K1 & 4E-BP1. α-tubulin was used as internal control. (B & C) Cells were incubated with 10nM rapamycin for 1 h (B) or 24 h (C). Immunoblots for phosphorylated & total forms of PERK, eIF2α, p70S6K1 & 4E-BP1 or for ATF4, CHOP, BiP, XBP1-s & XBP1-u protein expression were performed. α-tubulin was used as internal control. Blots of P-p70S6K1, p70S6K1, P-PERK, PERK, & α-tubulin of Figure 4B & blots of Figure 4C have been performed on the same electrophoresis gel, but cut & reconstituted. (D) Cells were incubated in medium alone (Ctrl) or with 10 nM rapamycin for 24 h. Nuclear localization of ATF6 was assessed using immunofluorescence with ATF6-antibody (red) & Hoechst dye. Magnification ×1000. (E) Bar graphs were obtained by quantification of ATF6 nuclear staining. Results are representative of at least 3 experiments. Image collected & cropped by CiteAb from the following publication (https://www.oncotarget.com/lookup/doi/10.18632/oncotarget.15469), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



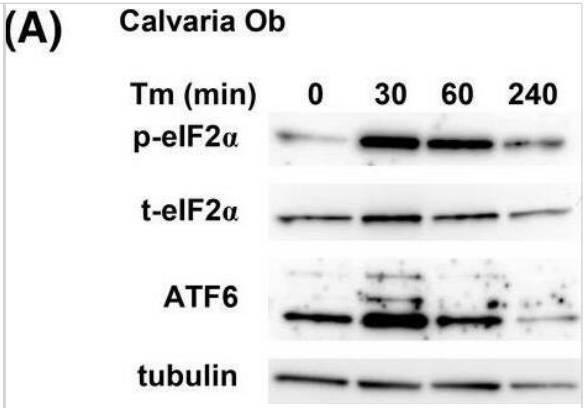
Immunocytochemistry/ Immunofluorescence: ATF6 Antibody (70B1413.1) - BSA Free [NBP1-40256] - Activation of the UPR during hypoxia or glucose depletionSTC-1 & GluTag cells were subjected to hypoxia (1%) or cultivated with decreasing concentration of glucose i.e. 25, 5 or 1 mM, for 24 h. (A) & (C) Protein expression level of phosphorylated & total forms of PERK, eIF2α & ATF4, CHOP, BiP & C-Caspase 3 protein expression was examined using immunoblots, during hypoxia (A) & glucose depletion (C). α-tubulin was used as internal control. Blots of Figure 2A have been performed on the same electrophoresis gel, but cut & reconstituted. (B) & (D) XBP1 mRNA splicing was analyzed by RT-PCR after Pst1 digestion: XBP1-u, unspliced; XBP1-h, hybrid; XBP1-s, spliced variant of XBP1; *, XBP1-u mRNA fragments after Pst1 digestion. (E) ATF6 nuclear localization was assessed in STC-1 cells using immunofluorescence with anti-ATF6 antibody & hoechst dye. Magnification x1000. Results are presentative of at least 3 independent experiments (A–E). (F) Bar graphs were obtained by quantification of ATF6 nuclear staining (*P < 0.05 versus control). Results are presentative of 3 independent experiments (A–E) or the mean ± S.E.M. of an experimental n = 3 (F). Image collected & cropped by CiteAb from the following publication (https://www.oncotarget.com/lookup/doi/10.18632/oncotarget.15469), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



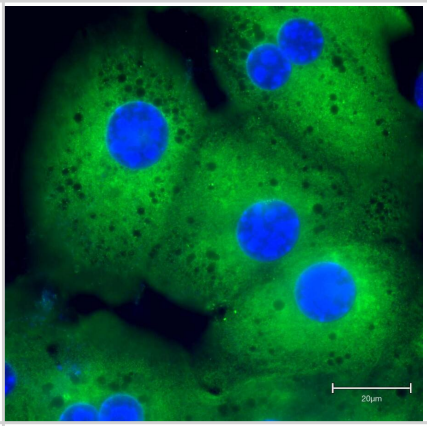
Immunocytochemistry/ Immunofluorescence: ATF6 Antibody (70B1413.1) - BSA Free [NBP1-40256] - UPR status in STC-1 & GluTag cell lines & effect of UPR inducers on markers of the UPR pathwaysSTC-1 & GluTag cells were incubated in medium (Ctrl) or ER stress-inducing agents thapsigargin (Tg, 300 nM), tunicamycin (Tn, 0.05 µg/mL) & brefeldin A (Bref A, 3 µM) for 4 h, 16 h & 8 h respectively. (A) Protein expression level of phosphorylated or total forms of PERK, eIF2α & CHOP, BiP & cleaved-caspase 3 (C-Caspase 3) protein expression was examined using Western Blot analysis. α-tubulin was used as internal control (B) Densitometric quantification of P-PERK/PERK, P-eIF2α/eIF2α & BiP/α-tubulin ratios analysis in STC-1 or GluTag cell lines (*P < 0.05 versus control). (C–D) The effect of Tg, Tn & Bref A on ATF6 nuclear localization was assessed by immunofluorescence in STC-1 cells (C) & GluTag cells (D) using anti-ATF6 antibody & Hoechst dye. Magnification ×1000. (E) Bar graphs obtained by quantification of ATF6 nuclear staining (*P < 0.05 versus control). (F) XBP1 mRNA splicing was analyzed by RT-PCR after Pst1 digestion: XBP1-h, hybrid, XBP1-u, unspliced; XBP1-s, spliced variant of XBP1; *, XBP1-u mRNA fragments after Pst1 digestion. Results are presentative of 3 independent experiments (A, C, D, F) or the mean ± S.E.M. of an experimental n = 3 (B, E). Image collected & cropped by CiteAb from the following publication (https://www.oncotarget.com/lookup/doi/10.18632/oncotarget.15469), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



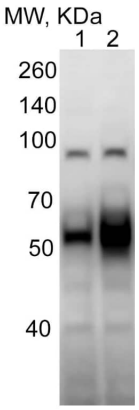
Western Blot: ATF6 Antibody (70B1413.1) - BSA Free [NBP1-40256] - Tm□induced UPR increases expression of RANKL in cultured osteoblastic & osteocytic cells. (A) Western blotting of cell lysates obtained from neonatal calvaria□derived osteoblastic cells (Calvaria Ob) treated with 2.2 µg/mL Tm for the indicated times. (B□D) Gene expression as determined by qRT□PCR in (B) calvaria□derived osteoblastic cells (n = 3/group) (C) Osteoblastic UAMS□32 cells (UAMS□32 Ob) (n = 4/group) or (D) osteocytic MLO□Y4 cells (MLO□Y4 Ot) (n = 4/group),maintained in presence of vehicle (, 0.1% DMSO) or 2.2 µg/ml Tm () for 4 hours. (E) Western blot of RANKL protein in cell lysates obtained from calvaria□derived osteoblastic cells as described in A in a separate study. Data shown are the mean & SD with individual data points. *P < .05 vs vehicle by Student's t□test Image collected & cropped by CiteAb from the following publication (https://pubmed.ncbi.nlm.nih.gov/32259048), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



Immunocytochemistry/Immunofluorescence: Mouse Monoclonal ATF6 Antibody (70B1413.1) [IMGENEX: IMG-273] [NBP1-40256] - Mice hepatocytes were stained for ATF6. Image from a verified customer review.



Western Blot: Mouse Monoclonal ATF6 Antibody (70B1413.1) [IMGENEX: IMG-273] [NBP1-40256] - Western blot of the mouse liver homogenates from control (1) and alcohol-fed mice (2). Image from a verified customer review.



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Elahe Zarini-Gakiye, Gholamhassan Vaezi, Kazem Parivar, Nima Sanadgol Age and Dose-Dependent Effects of Alpha-Lipoic Acid on Human Microtubule- Associated Protein Tau-Induced Endoplasmic Reticulum Unfolded Protein Response: Implications for Alzheimer's Disease. CNS & neurological disorders drug targets 2022-01-12 [PMID: 33573583]

Yuchang Li, Liting Chen, Lu Li, Chantal Sottas, Stephanie K. Petrillo, Anthoula Lazaris, Peter Metrakos, Hangyu Wu, Yuji Ishida, Takeshi Saito, Lucy Golden-Mason, Hugo R. Rosen, Jeremy J. Wolff, Cristina I. Silvescu, Samuel Garza, Garett Cheung, Tiffany Huang, Jinjiang Fan, Martine Culty, Bangyan Stiles, Kinji Asahina, Vassilios Papadopoulos Cholesterol-binding translocator protein TSPO regulates steatosis and bile acid synthesis in nonalcoholic fatty liver disease iScience 2021-05-01 [PMID: 34013171]

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Ming-Hong Sun, Wen-Jie Jiang, Xiao-Han Li, Song-Hee Lee, Geun Heo, Dongjie Zhou, Zhi Chen, Xiang-Shun Cui ATF6 aggravates apoptosis in early porcine embryonic development by regulating organelle homeostasis under high-temperature conditions Zoological Research 2023-09-18 [PMID: 37501400]

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Suravi Majumder, Abhijnan Chattopadhyay, Jamie M Wright, Pujun Guan, L Maximilian Buja, Callie S Kwartler, Dianna M Milewicz Pericentrin deficiency in smooth muscle cells augments atherosclerosis through HSF1-driven cholesterol biosynthesis and PERK activation. JCI insight 2023-11-14 [PMID: 37937642]

Alexandru P, Chiritoiu G, Lixandru D et al. EDEM1 regulates the insulin mRNA level by inhibiting the endoplasmic reticulum stress-induced IRE1/JNK/c-Jun pathway iScience 2023-09-01 [PMID: 37822496] (WB, Rat)

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