

ATF-6 β (E-14): sc-30597

BACKGROUND

ATF-6 is a member of the basic-leucine zipper family of transcription factors. Endoplasmic reticulum stress causes cleavage of transmembrane ATF-6 and translocation of active ATF-6 to the nucleus. Soluble ATF-6 can exist as either an ATF-6 β homodimer or an ATF-6 α / β heterodimer. Binding of the ATF-6 β homodimer or ATF-6 α / β heterodimer to the nuclear transcription factor Y C (NF-YC) induces ER chaperone transcription.

REFERENCES

1. Hai, T.W., et al. 1989. Transcription factor ATF cDNA clones: an extensive family of leucine zipper proteins able to selectively form DNA-binding heterodimers. *Genes Dev.* 3: 2083-2090.
2. Zhu, C., et al. 1997. Interaction of ATF6 and serum response factor. *Mol. Cell. Biol.* 17: 4957-4966.
3. Wang, Y., et al. 2000. Activation of ATF6 and an ATF6 DNA binding site by the endoplasmic reticulum stress response. *J. Biol. Chem.* 275: 27013-27020.
4. Li, M., et al. 2000. ATF6 as a transcription activator of the endoplasmic reticulum stress element: thapsigargin stress-induced changes and synergistic interactions with NF-Y and YY1. *Mol. Cell. Biol.* 20: 5096-5106.
5. Yoshida, H., et al. 2000. ATF6 activated by proteolysis binds in the presence of NF-Y (CBF) directly to the *cis*-acting element responsible for the mammalian unfolded protein response. *Mol. Cell. Biol.* 20: 6755-6767.
6. Urano, F., et al. 2000. IRE1 and efferent signaling from the endoplasmic reticulum. *J. Cell Sci.* 113: 3697-3702.

CHROMOSOMAL LOCATION

Genetic locus: ATF6B (human) mapping to 6p21.33; Atf6b (mouse) mapping to 17 B1.

SOURCE

ATF-6 β (E-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of ATF-6 β of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-30597 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

APPLICATIONS

ATF-6 β (E-14) is recommended for detection of ATF-6 β of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

ATF-6 β (E-14) is also recommended for detection of ATF-6 β in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for ATF-6 β siRNA (h): sc-105103, ATF-6 β siRNA (m): sc-141318, ATF-6 β shRNA Plasmid (h): sc-105103-SH, ATF-6 β shRNA Plasmid (m): sc-141318-SH, ATF-6 β shRNA (h) Lentiviral Particles: sc-105103-V and ATF-6 β shRNA (m) Lentiviral Particles: sc-141318-V.

Molecular Weight of full length ATF-6 β : 90 kDa.

Molecular Weight of cleaved ATF-6 β : 60 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

SELECT PRODUCT CITATIONS

1. Urban, P., et al. 2009. Molecular analysis of endoplasmic reticulum stress response after global forebrain ischemia/reperfusion in rats: effect of neuroprotectant simvastatin. *Cell. Mol. Neurobiol.* 29: 181-192.
2. Lehotský, J., et al. 2009. Molecular mechanisms leading to neuroprotection/ ischemic tolerance: effect of preconditioning on the stress reaction of endoplasmic reticulum. *Cell. Mol. Neurobiol.* 29: 917-925.
3. Tuñón, M.J., et al. 2013. Melatonin treatment reduces endoplasmic reticulum stress and modulates the unfolded protein response in rabbits with lethal fulminant hepatitis of viral origin. *J. Pineal Res.* 55: 221-228.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

MONOS
Satisfaction
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Try **ATF-6 β (4D10): sc-293306**, our highly recommended monoclonal alternative to ATF-6 β (E-14).