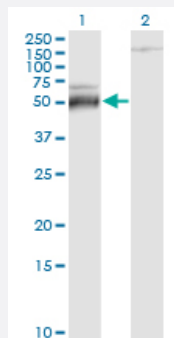


# ATF4 monoclonal antibody (M01), clone 2B3

Catalog # H00000468-M01

Size 100 ug

## Applications

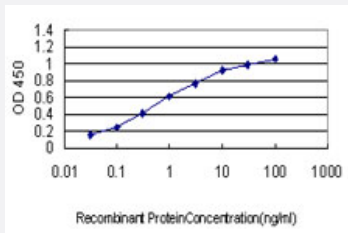


### Western Blot (Transfected lysate)

Western Blot analysis of ATF4 expression in transfected 293T cell line by ATF4 monoclonal antibody (M01), clone 2B3.

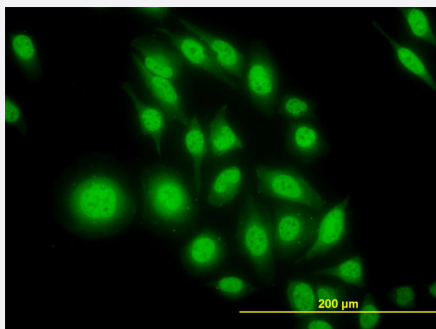
Lane 1: ATF4 transfected lysate (38.6 KDa).

Lane 2: Non-transfected lysate.



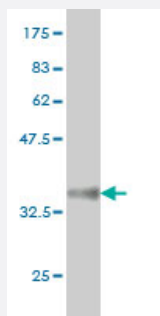
### Sandwich ELISA (Recombinant protein)

Detection limit for recombinant GST tagged ATF4 is approximately 0.03 ng/ml as a capture antibody.



### Immunofluorescence

Immunofluorescence of monoclonal antibody to ATF4 on HeLa cell. [antibody concentration 10 ug/ml]



Western Blot detection against Immunogen (36.74 KDa) .

## Specification

<b>Product Description</b>	Mouse monoclonal antibody raised against a partial recombinant ATF4.
<b>Immunogen</b>	ATF4 (NP_001666.2, 171 a.a. ~ 270 a.a) partial recombinant protein with GST tag. MW of the GST tag alone is 26 KDa.
<b>Sequence</b>	SSTPDHSFSLELGSEVDITEGDRKPDYTAYVAMIPQCICEEDTPSDNDSGICMSPESYLGSPQHSPSTRGSPNRSPLSPGVLCGSARPKPYDPPGEKMVA
<b>Host</b>	Mouse
<b>Reactivity</b>	Human
<b>Isotype</b>	IgG1 Kappa
<b>Quality Control Testing</b>	Antibody Reactive Against Recombinant Protein. Western Blot detection against Immunogen (36.74 KDa) .
<b>Storage Buffer</b>	In 1x PBS, pH 7.4
<b>Storage Instruction</b>	Store at -20°C or lower. Aliquot to avoid repeated freezing and thawing.

## Applications

- Western Blot (Transfected lysate)

Western Blot analysis of ATF4 expression in transfected 293T cell line by ATF4 monoclonal antibody (M01), clone 2B3.

Lane 1: ATF4 transfected lysate(38.6 KDa).

Lane 2: Non-transfected lysate.

[Protocol Download](#)

- Western Blot (Recombinant protein)

[Protocol Download](#)

- Sandwich ELISA (Recombinant protein)

Detection limit for recombinant GST tagged ATF4 is approximately 0.03ng/ml as a capture antibody.

[Protocol Download](#)

- ELISA

- Immunofluorescence

Immunofluorescence of monoclonal antibody to ATF4 on HeLa cell. [antibody concentration 10 ug/ml]

## Gene Info — ATF4

Entrez GeneID [468](#)

GeneBank Accession# [NM\\_001675](#)

Protein Accession# [NP\\_001666.2](#)

Gene Name ATF4

Gene Alias CREB-2, CREB2, TAXREB67, TXREB

Gene Description activating transcription factor 4 (tax-responsive enhancer element B67)

Omim ID [604064](#)

Gene Ontology [Hyperlink](#)

**Gene Summary**

This gene encodes a transcription factor that was originally identified as a widely expressed mammalian DNA binding protein that could bind a tax-responsive enhancer element in the LTR of HTLV-1. The encoded protein was also isolated and characterized as the cAMP-response element binding protein 2 (CREB-2). The protein encoded by this gene belongs to a family of DNA-binding proteins that includes the AP-1 family of transcription factors, cAMP-response element binding proteins (CREBs) and CREB-like proteins. These transcription factors share a leucine zipper region that is involved in protein-protein interactions, located C-terminal to a stretch of basic amino acids that functions as a DNA binding domain. Two alternative transcripts encoding the same protein have been described. Two pseudogenes are located on the X chromosome at q28 in a region containing a large inverted duplication. [provided by RefSeq]

**Other Designations** activating transcription factor 4|cAMP response element-binding protein 2

## Publication Reference

- [Cisplatin resistance can be curtailed by blunting Bnip3-mediated mitochondrial autophagy.](#)

Caterina Vianello, Veronica Cocetta, Daniela Catanzaro, Gerald W Dorn 2nd, Angelo De Milito, Flavio Rizzolio, Vincenzo Canzonieri, Erika Cecchin, Rossana Roncato, Giuseppe Toffoli, Vincenzo Quagliariello, Annabella Di Mauro, Simona Losito, Nicola Maurea, Scaffa Cono, Gabriele Sales, Luca Scorrano, Marta Giacomello, Monica Montopoli.

Cell Death & Disease 2022 Apr; 13(4):398.

Application: WB-Ce, Human, 2008, C13, U2OS, U2OS-PT cells

- [Melatonin Increases the Sensitivity of Hepatocellular Carcinoma to Sorafenib through the PERK-ATF4-Beclin1 Pathway.](#)

Zhou B, Lu Q, Liu J, Fan L, Wang Y, Wei W, Wang H, Sun G.

International Journal of Biological Sciences 2019 Jul; 15(9):1905.

Application: IF, WB-Ce, WB-TR, Human, HepG2 cells

- [Polydatin, Natural Precursor of Resveratrol, Promotes Osteogenic Differentiation of Mesenchymal Stem Cells.](#)

Di Benedetto A, Posa F, De Maria S, Ravagnan G, Ballini A, Porro C, Trotta T, Grano M, Muzio LL, Mori G.

International Journal of Medical Sciences 2018 Jun; 15(9):944.

Application: WB, Human, Human dental bud stem cells

- [A Protective Role of Heme-Regulated eIF2 \$\alpha\$  kinase in Cadmium-Induced Toxicity in Erythroid Cells.](#)

Wang L, Wang X, Zhang S, Qu G, Liu S.

Food and Chemical Toxicology 2013 Dec; 62:880.

Application: WB-Ce, Mouse, MEL, FL cells

- [Decreased vitamin B12 availability induces ER stress through impaired SIRT1-deacetylation of HSF1.](#)

Ghemrawi R, Pooya S, Lorentz S, Gauchotte G, Arnold C, Gueant JL, Battaglia-Hsu SF.

Cell Death & Disease 2013 Mar; 4:e553.

Application: WB-Tr, Mouse, N1E115 cells

- [Heme-regulated eIF2 \$\alpha\$  kinase activated Atf4 signaling pathway in oxidative stress and erythropoiesis.](#)

Suragani RN, Zachariah RS, Velazquez JG, Liu S, Sun CW, Townes TM, Chen JJ.

Blood 2012 May; 119(22):5276.

Application: WB-Ce, Mouse, Mouse fetal liver primary cultures

- [12/15-Lipoxygenase signaling in the endoplasmic reticulum stress response.](#)

Cole BK, Kuhn NS, Green-Mitchell SM, Leone KA, Raab RM, Nadler JL, Chakrabarti SK.

American Journal of Physiology. Endocrinology and Metabolism. 2012 Mar; 302(6):E654.

Application: WB-Ce, Mouse, 3T3-L1 adipocytes

- [Calcium Channel Blocker Verapamil Enhances Endoplasmic Reticulum Stress and Cell Death Induced by Proteasome Inhibition in Myeloma Cells.](#)

Meister S, Frey B, Lang VR, Gaipf US, Schett G, Schlotzer-Schrehardt U, Voll RE.

Neoplasia 2010 Jul; 12(7):550.

Application: WB-Ce, Human, JK-6L cells

## Pathway

- [GnRH signaling pathway](#)
- [Long-term potentiation](#)
- [MAPK signaling pathway](#)
- [Neurotrophin signaling pathway](#)
- [Prostate cancer](#)

## Disease

- [Bipolar Disorder](#)
- [Genetic Predisposition to Disease](#)
- [Mental Disorders](#)
- [Neuropsychological Tests](#)
- [Schizophrenia](#)