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ATF4 Antibody (monoclonal) (M01)

Mouse monoclonal antibody raised against a partial recombinant ATF4.
Catalog # AT1224a

Product Information

Application	WB, IF, E
Primary Accession	P18848
Other Accession	NM_001675
Reactivity	Human
Host	Mouse
Clonality	monoclonal
Isotype	IgG1 Kappa
Clone Names	2B3
Calculated MW	38590

Additional Information

Gene ID	468
Other Names	Cyclic AMP-dependent transcription factor ATF-4, cAMP-dependent transcription factor ATF-4, Activating transcription factor 4, Cyclic AMP-responsive element-binding protein 2, CREB-2, cAMP-responsive element-binding protein 2, DNA-binding protein TAXREB67, Tax-responsive enhancer element-binding protein 67, TaxREB67, ATF4, CREB2, TXREB
Target/Specificity	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.
Dilution	WB~~1:500~1000 IF~~1:50~200 E~~N/A
Format	Clear, colorless solution in phosphate buffered saline, pH 7.2 .
Storage	Store at -20°C or lower. Aliquot to avoid repeated freezing and thawing.
Precautions	ATF4 Antibody (monoclonal) (M01) is for research use only and not for use in diagnostic or therapeutic procedures.

Background

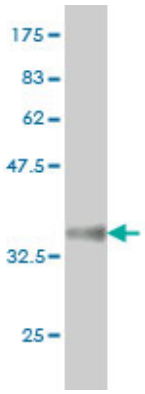
This gene encodes a transcription factor that was originally identified as a widely expressed mammalian DNA binding protein that could bind a tax-responsive enhancer element in the LTR of HTLV-1. The encoded protein was also isolated and characterized as the cAMP-response element binding protein 2 (CREB-2). 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 chromsome at q28 in a region containing a large inverted duplication.

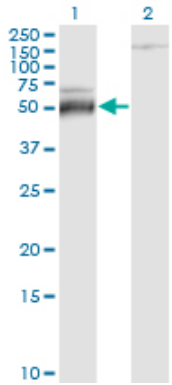
References

1.A Protective Role of Heme-Regulated eIF2α kinase in Cadmium-Induced Toxicity in Erythroid Cells.Wang L, Wang X, Zhang S, Qu G, Liu SFood Chem Toxicol. 2013 Oct 22;62C:880-891. doi: 10.1016/j.fct.2013.10.017.2.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 SFCell Death Dis. 2013 Mar 21;4:e553. doi: 10.1038/cddis.2013.69.3.Heme-regulated eIF2? 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 31;119(22):5276-84. Epub 2012 Apr 12.4.12/15-Lipoxygenase signaling in the endoplasmic reticulum stress response.Cole BK, Kuhn NS, Green-Mitchell SM, Leone KA, Raab RM, Nadler JL, Chakrabarti SK.Am J Physiol Endocrinol Metab. 2012 Mar;302(6):E654-65. Epub 2012 Jan 3.5.Calcium Channel Blocker Verapamil Enhances Endoplasmic Reticulum Stress and Cell Death Induced by Proteasome Inhibition in Myeloma Cells.Meister S, Frey B, Lang VR, Gaipl US, Schett G, Schlotzer-Schrehardt U, Voll RE.Neoplasia. 2010 Jul;12(7):550-61.

Images

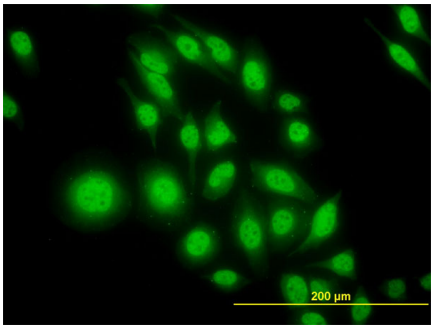


Antibody Reactive Against Recombinant Protein.Western Blot detection against Immunogen (36.74 KDa) .

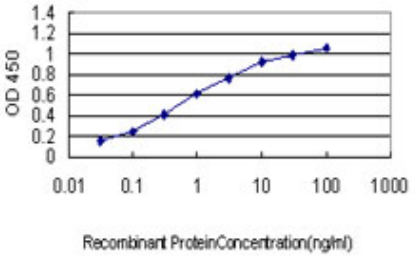


Western Blot analysis of ATF4 expression in transfected 293T cell line by ATF4 monoclonal antibody (M01), clone 2B3.

Lane 1: ATF4 transfected lysate(38.6 KDa).
Lane 2: Non-transfected lysate.



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



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

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.