For Research Use Only

FITC-conjugated ATF4 Polyclonal antibody

Catalog Number:FITC-10835 Featured Product 2 Publications

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Basic Information

Catalog Number:
FITC-10835

Size:
100ul , Concentration: 1000 ug/ml by Nanodrop;

Source:
Rabbit

Isotype:
IgG

Immunogen Catalog Number:
AG1279

GenBank Accession Number:
BC022088

GeneID (NCBI):
468

UNIPROT ID:
P18848

Full Name:
activating transcription factor 4 (tax-responsive enhancer element B67)

Calculated MW:
39 kDa

Observed MW:
45-50 kDa

Purification Method:
Antigen affinity purification

Recommended Dilutions:
IF/ICC 1:50-1:500

Excitation/Emission maxima wavelengths:
498 nm / 526 nm

Applications

Tested Applications:
IF/ICC, FC (Intra)

Cited Applications:
IF

Species Specificity:
human, mouse

Cited Species:
human

Positive Controls:

IF/ICC : HepG2 cells, Tunicamycin treated HeLa cells

Background Information

ATF4 is a transcription factor, that accumulates predominantly in osteoblasts, where it regulates terminal osteoblast differentiation and bone formation[PMID: 19016586]. As a basic leucine-zipper (bZip) transcription factor, ATF4 can regulate amino acid metabolism, cellular redox state, and anti-stress responses. It also regulates age-related and diet-induced obesity and glucose homeostasis in mammals, and has conserved metabolic functions in flies[PMID: 19726872]. Due to its location at chromosome 22q13, a region linked to schizophrenia, ATF4 is considered as a positional candidate gene for schizophrenia[PMID: 18163433]. Otherwise, since ATF4 is induced by tumour microenvironmental factors, and regulates processes relevant to cancer progression, it might serve as a potential therapeutic target in cancer. Endogenous ATF4 protein has a molecular mass of 50kd. [PMID: 17726049]. This antibody is a rabbit polyclonal antibody raised against full length human ATF4 antigen. The antibody recognizes the 38kd ATF4 protein and its phosphorylated forms (50kd). ATF4 can bind DNA as a homodimer and as a heterodimer. ATF4 is ubiquitinated by SCF(BTRC) in response to mTORC1 signal, followed by proteasomal degradation and leading to down-regulate expression of SIRT4, so the molecular weight of ATF4 may be 70 kDa.

Notable Publications

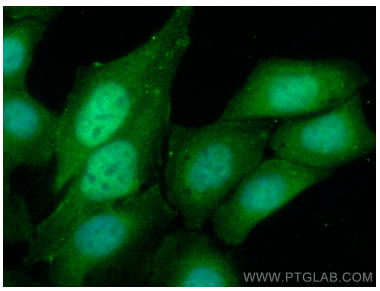
Author	Pubmed ID	Journal	Application
Yibo Dong	30181714	Cancer Cell Int	IF
Meiyang Yang	38708180	Int J Nanomedicine	

Storage

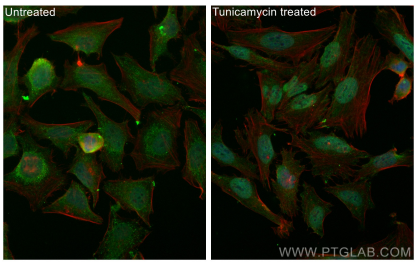
Storage:
Store at -20°C. Avoid exposure to light. Stable for one year after shipment.
Storage Buffer:
PBS with 50% Glycerol, 0.05% Proclin300, 0.5% BSA, pH 7.3.
Aliquoting is unnecessary for -20°C storage

For technical support and original validation data for this product please contact:
T: 1 (888) 4PTGLAB (1-888-478-4522) (toll free in USA), or 1(312) 455-8498 (outside USA)
E: proteintech@ptglab.com
W: ptglab.com

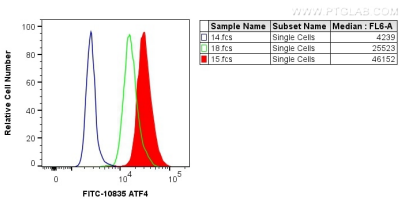
Selected Validation Data



Immunofluorescent analysis of (4% PFA) fixed HepG2 cells using FITC ATF4 antibody (FITC-10835) at dilution of 1:200.



Immunofluorescent analysis of (4% PFA) fixed Tunicamycin treated HeLa cells using FITC ATF4 antibody (FITC-10835) at dilution of 1:200, CL594-Phalloidin (red).



1X10^6 HeLa cells were intracellularly stained with 0.6 ug FITC Anti-Human ATF4 (FITC-10835) (red), or 0.6 ug Control Antibody. Cells were fixed with 4% PFA and permeabilized with Flow Cytometry Perm Buffer (PF00011-C).