

# CoraLite® Plus 488-conjugated ATF4 Polyclonal antibody

Catalog Number: CL488-10835

## Basic Information

<b>Catalog Number:</b> CL488-10835	<b>GenBank Accession Number:</b> BC022088	<b>Purification Method:</b> Antigen affinity purification
<b>Size:</b> 100ul , Concentration: 1000 ug/ml by Nanodrop;	<b>GeneID (NCBI):</b> 468	<b>Recommended Dilutions:</b> IF/ICC 1:50-1:500
<b>Source:</b> Rabbit	<b>UNIPROT ID:</b> P18848	<b>Excitation/Emission maxima wavelengths:</b> 493 nm / 522 nm
<b>Isotype:</b> IgG	<b>Full Name:</b> activating transcription factor 4 (tax-responsive enhancer element B67)	
<b>Immunogen Catalog Number:</b> AG1279	<b>Calculated MW:</b> 39 kDa	
	<b>Observed MW:</b> 45-50 kDa	

## Applications

<b>Tested Applications:</b> IF/ICC, FC (Intra)	<b>Positive Controls:</b> IF/ICC : Tunicamycin treated MCF-7 cells,
<b>Species Specificity:</b> human, mouse	

## 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.

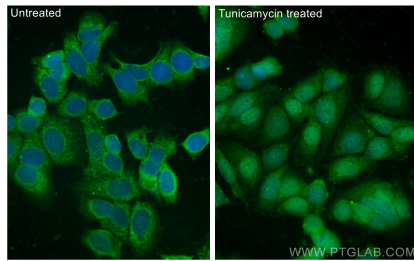
## Storage

**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**

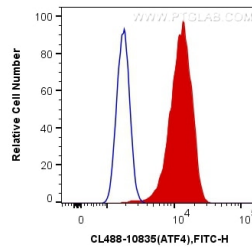
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## Selected Validation Data



Immunofluorescent analysis of (-20°C Methanol) fixed Tunicamycin treated MCF-7 cells using CoraLite® Plus 488 ATF4 antibody (CL488-10835) at dilution of 1:200.



1X10<sup>6</sup> HeLa cells were intracellularly stained with 0.5 ug CoraLite® Plus 488 Anti-Human ATF4 (CL488-10835) (red), or 0.5 ug Control Antibody. Cells were fixed with 4% PFA and permeabilized with Flow Cytometry Perm Buffer (PF00011-C).