

# CoraLite® Plus 488-conjugated ATF4 Polyclonal antibody

Catalog Number: **CL488-10835**

## Basic Information

**Catalog Number:**

CL488-10835

**Size:**

1000 µg/ml

**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 1:50-1:500

**Excitation/Emission maxima wavelengths:**

493 nm / 522 nm

## Applications

**Tested Applications:**

FC (Intra), IF-P

**Species Specificity:**

human, mouse

**Positive Controls:**

IF : mouse brain tissue,

## 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:**

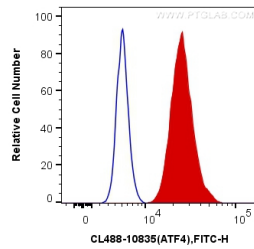
Store at -20°C. Avoid exposure to light. Stable for one year after shipment.

**Storage Buffer:**

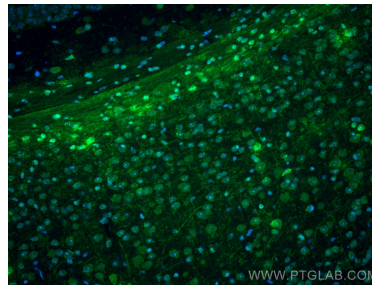
PBS with 50% Glycerol, 0.05% Proclin300, 0.5% BSA, pH 7.3.

Aliquoting is unnecessary for -20°C storage

## Selected Validation Data



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).



Immunofluorescent analysis of (4% PFA) fixed mouse brain tissue using CoraLite® Plus 488 ATF4 antibody (CL488-10835) at dilution of 1:200.