

# ATF4 Recombinant antibody

Catalog Number: 81798-1-RR

## Basic Information

<b>Catalog Number:</b> 81798-1-RR	<b>GenBank Accession Number:</b> BC022088	<b>Purification Method:</b> Protein A purification
<b>Size:</b> 100ul , Concentration: 750 µg/ml by Nanodrop;	<b>GeneID (NCBI):</b> 468	<b>CloneNo.:</b> 5N3
<b>Source:</b> Rabbit	<b>Full Name:</b> activating transcription factor 4 (tax-responsive enhancer element B67)	<b>Recommended Dilutions:</b> WB 1:5000-1:50000 IP 0.5-4.0 ug for IP and 1:1000-1:8000 for WB
<b>Isotype:</b> IgG	<b>Calculated MW:</b> 39 kDa	<b>IHC 1:50-1:500</b>
<b>Immunogen Catalog Number:</b> AG1279	<b>Observed MW:</b> 50 kDa	

## Applications

### Tested Applications:

IHC, IP, WB, ELISA

### Species Specificity:

Human

**Note-IHC: suggested antigen retrieval with TE buffer pH 9.0; (\*) Alternatively, antigen retrieval may be performed with citrate buffer pH 6.0**

### Positive Controls:

**WB:** A431 cells, MG132 treated HEK-293 cells, MG132 treated HeLa cells

**IP:** HEK-293 cells,

**IHC:** human breast cancer tissue, human stomach cancer 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]. 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. Stable for one year after shipment.

### Storage Buffer:

PBS with 0.02% sodium azide and 50% glycerol pH 7.3.

Aliquoting is unnecessary for -20°C storage

\*\*\* 20ul sizes contain 0.1% BSA

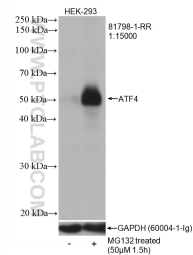
For technical support and original validation data for this product please contact:

T: 1 (888) 4PTGLAB (1-888-478-4522) (toll free in USA), or 1(312) 455-8498 (outside USA)

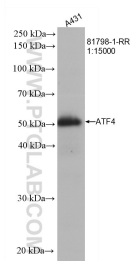
E: proteintech@ptglab.com  
W: ptglab.com

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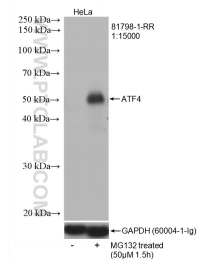
## Selected Validation Data



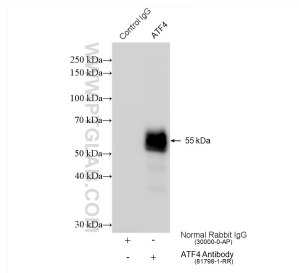
Non-treated HEK-293 and MG132 treated HEK-293 cells were subjected to SDS PAGE followed by western blot with 81798-1-RR (ATF4 antibody) at dilution of 1:15000 incubated at room temperature for 1.5 hours. The membrane was stripped and re-blotted with GAPDH antibody as loading control.



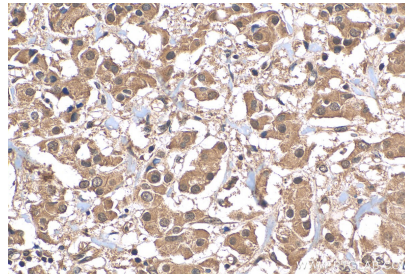
A431 cells were subjected to SDS PAGE followed by western blot with 81798-1-RR (ATF4 antibody) at dilution of 1:15000 incubated at room temperature for 1.5 hours.



Non-treated HeLa and MG132 treated HeLa cells were subjected to SDS PAGE followed by western blot with 81798-1-RR (ATF4 antibody) at dilution of 1:15000 incubated at room temperature for 1.5 hours. The membrane was stripped and re-blotted with GAPDH antibody as loading control.



IP result of anti-ATF4 (IP:81798-1-RR, 4µg; Detection:81798-1-RR 1:4000) with HEK-293 cells lysate 1480 µg.



Immunohistochemical analysis of paraffin-embedded human breast cancer tissue slide using 81798-1-RR (ATF4 antibody) at dilution of 1:200 (under 40x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).