

For Research Use Only

# ATF4 Recombinant antibody, PBS Only

Catalog Number: 81798-1-PBS



## Basic Information

<b>Catalog Number:</b> 81798-1-PBS	<b>GenBank Accession Number:</b> BC022088	<b>Purification Method:</b> Protein A purification
<b>Size:</b> 100ug , Concentration: 1 mg/ml by Nanodrop;	<b>GeneID (NCBI):</b> 468	<b>CloneNo.:</b> 5N3
<b>Source:</b> Rabbit	<b>UNIPROT ID:</b> P18848	
<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> 50 kDa	

## Applications

**Tested Applications:**  
WB, IHC, IP, Indirect ELISA

**Species Specificity:**  
human

## 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

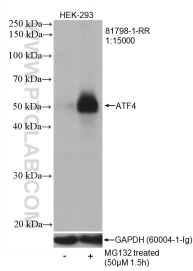
**Storage:**  
Store at -80°C.

**Storage Buffer:**  
PBS only, pH7.3

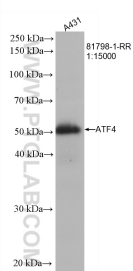
For technical support and original validation data for this product please contact:  
T: 1 (888) 4PTGLAB (1-888-478-4522) (toll free in USA), or 1(312) 455-8498 (outside USA)  
E: proteintech@ptglab.com  
W: ptglab.com

This product is exclusively available under Proteintech Group brand and is not available to purchase from any other manufacturer.

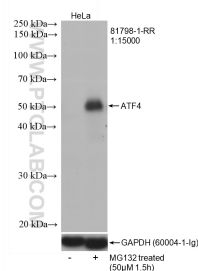
Selected Validation Data



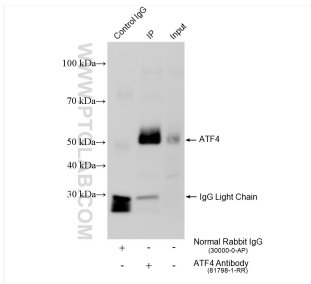
Non-treated HEK-293 and MG132 treated HEK-293 cells were subjected to SDS PAGE followed by western blot with 81798-1-RR (ATF4 antibody) at dilution of 1:15000 incubated at room temperature for 1.5 hours. The membrane was stripped and re-blotted with GAPDH antibody as loading control. This data was developed using the same antibody clone with 81798-1-PBS in a different storage buffer formulation.



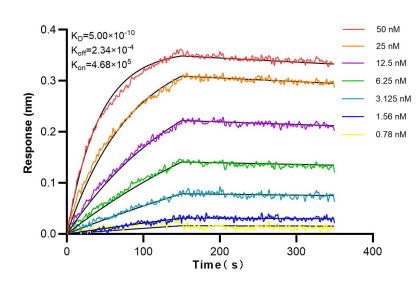
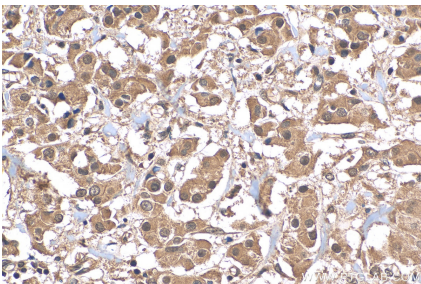
A431 cells were subjected to SDS PAGE followed by western blot with 81798-1-RR (ATF4 antibody) at dilution of 1:15000 incubated at room temperature for 1.5 hours. This data was developed using the same antibody clone with 81798-1-PBS in a different storage buffer formulation.



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. This data was developed using the same antibody clone with 81798-1-PBS in a different storage buffer formulation.



IP result of anti-ATF4 (IP:81798-1-RR, 4ug; Detection:81798-1-RR 1:4000) with HEK-293 cells lysate 1440 ug. This data was developed using the same antibody clone with 81798-1-PBS in a different storage buffer formulation.



Biolayer interferometry (BLI) kinetic assays of 81798-1-RR against Human ATF4 were performed. The affinity constant is 0.500 nM.