

For Research Use Only

ATF4 Recombinant antibody

Catalog Number: 81798-1-RR



Basic Information

Catalog Number: 81798-1-RR	GenBank Accession Number: BC022088	Purification Method: Protein A purification
Size: 100ul, Concentration: 750 ug/ml by Nanodrop;	GeneID (NCBI): 468	CloneNo.: 5N3
Source: Rabbit	UNIPROT ID: P18848	Recommended Dilutions: WB 1:5000-1:50000 IP 0.5-4.0 ug for 1.0-3.0 mg of total protein lysate IHC 1:50-1:500
Isotype: IgG	Full Name: activating transcription factor 4 (tax-responsive enhancer element B67)	
Immunogen Catalog Number: AG1279	Calculated MW: 39 kDa	
	Observed MW: 50 kDa	

Applications

Tested Applications: WB, IHC, IP, ELISA	Positive Controls:
Species Specificity: human	WB : A431 cells, MG132 treated HEK-293 cells, MG132 treated HeLa cells
Note-IHC: suggested antigen retrieval with TE buffer pH 9.0; (*) Alternatively, antigen retrieval may be performed with citrate buffer pH 6.0	IP : HEK-293 cells,
	IHC : human breast cancer tissue, human stomach cancer tissue, human colon 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

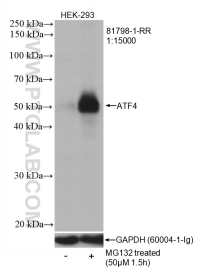
Storage:
Store at -20°C. Stable for one year after shipment.
Storage Buffer:
PBS with 0.02% sodium azide and 50% glycerol, pH7.3
Aliquoting is unnecessary for -20°C storage

*** 20ul sizes contain 0.1% BSA

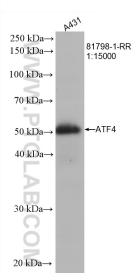
For technical support and original validation data for this product please contact:
T: 1 (888) 4PTGLAB (1-888-478-4522) (toll free in USA), or 1(312) 455-8498 (outside USA)
E: proteintech@ptglab.com
W: ptglab.com

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

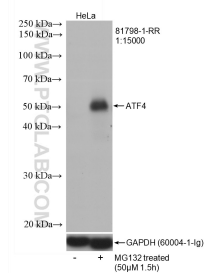
Selected Validation Data



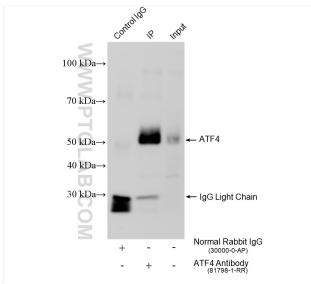
Non-treated HEK-293 and MG132 treated HEK-293 cells were subjected to SDS PAGE followed by western blot with 81798-1-RR (ATF4 antibody) at dilution of 1:15000 incubated at room temperature for 1.5 hours. The membrane was stripped and re-blotted with GAPDH antibody as loading control.



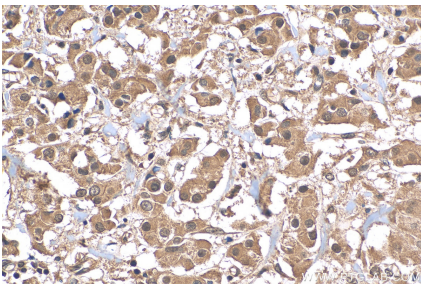
A431 cells were subjected to SDS PAGE followed by western blot with 81798-1-RR (ATF4 antibody) at dilution of 1:15000 incubated at room temperature for 1.5 hours.



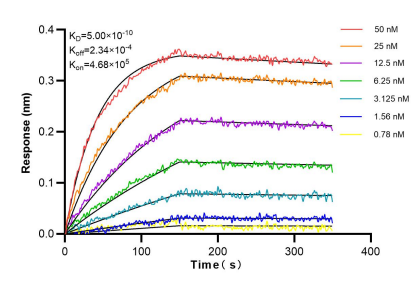
Non-treated HeLa and MG132 treated HeLa cells were subjected to SDS PAGE followed by western blot with 81798-1-RR (ATF4 antibody) at dilution of 1:15000 incubated at room temperature for 1.5 hours. The membrane was stripped and re-blotted with GAPDH antibody as loading control.



IP result of anti-ATF4 (IP:81798-1-RR, 4ug; Detection:81798-1-RR 1:4000) with HEK-293 cells lysate 1440 ug.



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).



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