

For Research Use Only

ATF4 Recombinant antibody, PBS Only

Catalog Number: 81798-1-PBS



Basic Information

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

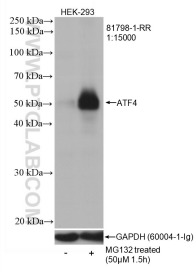
Storage:
Store at -80°C.

Storage Buffer:
PBS Only

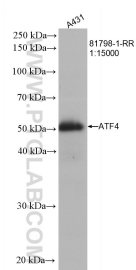
For technical support and original validation data for this product please contact:
T: 1 (888) 4PTGLAB (1-888-478-4522) (toll free in USA), or 1(312) 455-8498 (outside USA)
E: proteintech@ptglab.com
W: ptglab.com

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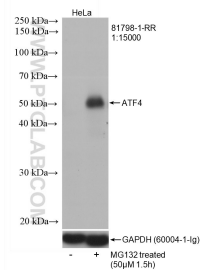
Selected Validation Data



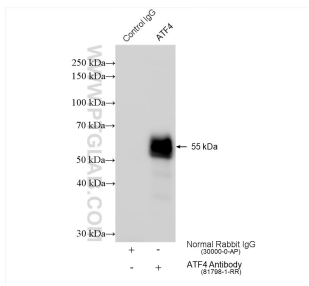
Non-treated HEK-293 and MG132 treated HEK-293 cells were subjected to SDS PAGE followed by western blot with 81798-1-RR (ATF4 antibody) at dilution of 1:15000 incubated at room temperature for 1.5 hours. The membrane was stripped and re-blotted with GAPDH antibody as loading control. This data was developed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



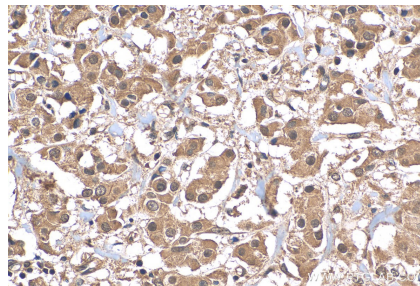
A431 cells were subjected to SDS PAGE followed by western blot with 81798-1-RR (ATF4 antibody) at dilution of 1:15000 incubated at room temperature for 1.5 hours. This data was developed using the same antibody clone with 81798-1-PBS in a different storage buffer formulation.



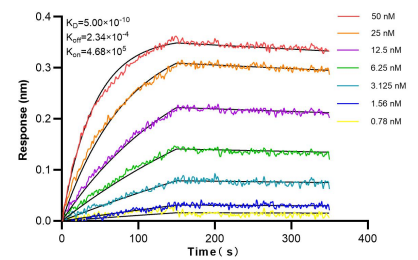
Non-treated HeLa and MG132 treated HeLa cells were subjected to SDS PAGE followed by western blot with 81798-1-RR (ATF4 antibody) at dilution of 1:15000 incubated at room temperature for 1.5 hours. The membrane was stripped and re-blotted with GAPDH antibody as loading control. This data was developed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



IP result of anti-ATF4 (IP:81798-1-RR, 4µg; Detection:81798-1-RR 1:4000) with HEK-293 cells lysate 1480 µg. This data was developed using the same antibody clone with 81798-1-PBS in a different storage buffer formulation.



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). 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.