

For Research Use Only

ATF4 Polyclonal antibody

Catalog Number: 28657-1-AP **10 Publications**



Basic Information

Catalog Number: 28657-1-AP	GenBank Accession Number: BC022088	Purification Method: Antigen affinity purification
Concentration: 1600 ug/ml	GeneID (NCBI): 468	Recommended Dilutions: WB 1:1000-1:4000 IHC 1:50-1:500
Source: Rabbit	UNIPROT ID: P18848	
Isotype: IgG	Full Name: activating transcription factor 4 (tax-responsive enhancer element B67)	
Immunogen Catalog Number: AG29844	Calculated MW: 39 kDa	
	Observed MW: 45-50 kDa	

Applications

Tested Applications: WB, IHC, ELISA	Positive Controls:
Cited Applications: WB, IF, ChIP	WB: A431 cells, HeLa cells
Species Specificity: human	IHC: human breast cancer tissue,
Cited Species: human, mouse, rat	

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

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.

Notable Publications

Author	Pubmed ID	Journal	Application
Yan Cao	34841454	Inflammation	WB
Wenwen Liu	35786405	Autophagy	WB
Qiushuang Zhu	33450633	J Hazard Mater	WB

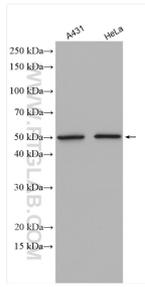
Storage

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

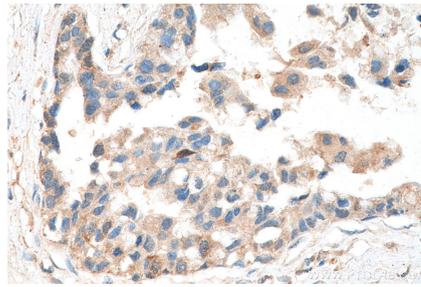
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Selected Validation Data



Various lysates were subjected to SDS PAGE followed by western blot with 28657-1-AP (ATF4 antibody) at dilution of 1:2000 incubated at room temperature for 1.5 hours.



Immunohistochemical analysis of paraffin-embedded human breast cancer tissue slide using 28657-1-AP (ATF4 antibody) at dilution of 1:200 (under 40x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).