

Datasheet: AHP2273

Description:	RABBIT ANTI ATF2 (pSer490/pSer498)
Specificity:	ATF2 (pSer490/pSer498)
Other names:	HB16
Format:	Purified
Product Type:	Polyclonal Antibody
Isotype:	Polyclonal IgG
Quantity:	0.1 ml

Product Details

Applications

This product has been reported to work in the following applications. This information is derived from testing within our laboratories, peer-reviewed publications or personal communications from the originators. Please refer to references indicated for further information. For general protocol recommendations, please visit www.bio-rad-antibodies.com/protocols.

	Yes	No	Not Determined	Suggested Dilution
Western Blotting (1)	■			1/1000

Where this product has not been tested for use in a particular technique this does not necessarily exclude its use in such procedures. Suggested working dilutions are given as a guide only. It is recommended that the user titrates the product for use in their own system using appropriate negative/positive controls.

(1) **For the detection of phosphoproteins, phosphatase inhibitors should always be added freshly to the lysis buffer. Milk or other casein-based blocking solutions are generally not recommended for blocking; as casein is itself a phosphoprotein its use can result in high background.**

Target Species	Human
Species Cross Reactivity	Based on sequence similarity, is expected to react with: Rat N.B. Antibody reactivity and working conditions may vary between species.
Product Form	Purified IgG - liquid

Antiserum Preparation Antiserum to ATF2 (pSer490/pSer498) was raised by repeated immunisations of rabbits with highly purified antigen. Purified IgG was prepared by affinity purification via sequential chromatography on phospho- and dephospho-peptide affinity columns

Buffer Solution	HEPES buffered saline
Preservative Stabilisers	0.09% Sodium Azide (NaN ₃) 1% Bovine Serum Albumin 50% Glycerol
Immunogen	Phosphopeptide corresponding to amino acid residues surrounding the phospho-Ser490/Ser498 region of human ATF2

**External Database
Links**

UniProt:

[P15336](#)

[Related reagents](#)

Entrez Gene:

[1386](#)

ATF2

[Related reagents](#)

Synonyms

CREB2, CREBP1

Specificity

Rabbit anti ATF2 (pSer490/pSer498) antibody recognizes activating transcription factor 2 (ATF2), also known as cyclic AMP-dependent transcription factor ATF-2 and cyclic AMP-responsive element-binding protein 2 (CREB-2), when phosphorylated at serine 490 and 498.

The ATF2 gene encodes a transcription factor that is a member of the leucine zipper family of DNA-binding proteins. This protein binds to the cAMP-responsive element (CRE), an octameric palindrome. The protein forms a homodimer or heterodimer with c-Jun and stimulates CRE-dependent transcription. Several studies implicate abnormal activation of ATF-2 in growth and progression of mammalian skin tumors.

ATF2 may mediate oncogenesis caused by mutant Ras protein and regulate maintenance of the aggressive cancer phenotype of some types of epithelial cells. ATF2 has also been shown to be phosphorylated by ATM at Serine 490 and 498 in humans. The serine phosphorylated forms play a role in mediating DNA repair and in response to DNA damage induced by ionizing radiation (IR).

ATF2 exhibits histone acetyltransferase (HAT) activity and has been reported to specifically acetylate histones H2B and H4 *in vitro*. In concert with CUL3 and RBX1, ATF2 promotes the degradation of KAT5 thereby attenuating its ability to acetylate and activate ATM. This protein can also elicit oncogenic or tumor suppressor activities depending on the tissue or cell type.

In response to stress stimuli, ATF2 activates a variety of gene targets that are involved in oncogenesis, and has been correlated with maintenance of a cancer cell phenotype. Inhibiting ATF2 impedes melanoma development and elicits tumor suppressor function. To act as a tumor suppressor, ATF2 must localize at the mitochondria and phosphorylation at Thr52 by PKCε regulates this translocation.

Western Blotting

Rabbit anti Human ATF2 detects a band of approximately 74 kDa in human melanoma cell lysates after treatment with the radiomimetic drug NCS

Storage

Store at +4°C or at -20°C if preferred.

Storage in frost-free freezers is not recommended.

This product should be stored undiluted. Should this product contain a precipitate we recommend microcentrifugation before use.

Shelf Life

12 months from date of despatch.

**Health And Safety
Information**

Material Safety Datasheet documentation #10088 available at:
10088: <https://www.bio-rad-antibodies.com/uploads/MSDS/10088.pdf>

Regulatory

For research purposes only

Related Products

Recommended Secondary Antibodies

Sheep Anti Rabbit IgG (STAR34...)	FITC
Sheep Anti Rabbit IgG (STAR35...)	RPE
Goat Anti Rabbit IgG (H/L) (STAR124...)	HRP
Goat Anti Rabbit IgG (Fc) (STAR121...)	Biotin , FITC , HRP
Sheep Anti Rabbit IgG (2AB02...)	Biotin
Sheep Anti Rabbit IgG (STAR36...)	DyLight®488 , DyLight®549 , DyLight®649 , DyLight®680 , DyLight®800

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