10320 Camino Santa Fe, Suite G
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Phospho-Ser490,498 ATF2 Antibody

Affinity purified rabbit polyclonal antibody

Catalog # AN1003

Specification

Phospho-Ser490,498 ATF2 Antibody - Product Information

Application	**WB**
Primary Accession	P15336
Reactivity	**Human**
Predicted	**Rat**
Host	**Rabbit**
Clonality	**polyclonal**
Calculated MW	**74 KDa**

Phospho-Ser490,498 ATF2 Antibody - Additional Information

Gene ID	**1386**
Gene Name	**ATF2**

Other Names

Cyclic AMP-dependent transcription factor ATF-2, cAMP-dependent transcription factor ATF-2, Activating transcription factor 2, Cyclic AMP-responsive element-binding protein 2, CREB-2, cAMP-responsive element-binding protein 2, HB16, Histone acetyltransferase ATF2, cAMP response element-binding protein CRE-BP1, ATF2, CREB2, CREBP1

Target/Specificity

Synthetic phospho-peptide corresponding to amino acid residues surrounding Ser490/498 conjugated to KLH.

Dilution

WB~~1:1000

Format

Prepared from rabbit serum by affinity purification via sequential chromatography on phospho- and dephosphopeptide affinity columns.

Antibody Specificity

Specific for ~74k ATF2 protein phosphorylated at Ser490,498. The antibody also recognizes the phosphorylated ~54k splice form of ATF2.

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions

Phospho-Ser490,498 ATF2 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Shipping

Blue Ice

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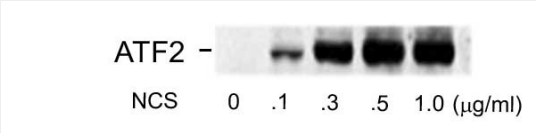
Phospho-Ser490,498 ATF2 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Phospho-Ser490,498 ATF2 Antibody - Images



Western blot of human melanoma cells incubated with varying doses of the radiomimetic drug NCS showing specific immuno-labeling of the ~74k ATF2 protein phosphorylated at Ser490 and Ser498.

Phospho-Ser490,498 ATF2 Antibody - Background

The activating transcription factor ATF2 (also called CRE-BP1) binds to both AP-1 and CRE DNA response elements and is a member of the ATF/CREB family of leucine zipper proteins (Maekawa et al., 1989). ATF2 has been implicated in the transcriptional regulation of a number of genes including cytokines, cell cycle control and apoptosis. Various forms of cellular stress, including inflammatory cytokines and UV irradiation, stimulate the transcriptional activity of ATF2 (Ivanov et al., 2003; Morton et al., 2004). Stress induced ATF-dependent transcription is dependent on phosphorylation of ATF (Fuchs et al., 2000); Morton et al., 2004). Serine 490 and serine 498 are novel phosphorylation sites on ATF that have recently been identified. ATF2 is particularly abundant in the brain and the ATF2 family of transcription factors is considered an important substrate of signals upstream of the activation of genes associated with neuronal growth and differentiation (Karin and Hunter, 1995). ATF expression has also been linked to the depression in humans (Laifenfeld et al., 2004).

Phospho-Ser490,498 ATF2 Antibody - References

Fuchs SY, Tappin I, Ronai Z (2000) Stability of the ATF2 transcription factor is regulated by phosphorylation and dephosphorylation. J Biol Chem 275:12560-12564.
Ivanov VN, Bhoumik A, Ronai Z (2003) Death receptors and melanoma resistance to apoptosis. Oncogene 22:3152-3161.
Karin M, Hunter T (1995) Transcriptional control by protein phosphorylation: Signal transmission from the cell surface to the nucleus. Curr Biol 5:747-757.
Laifenfeld D, Karry R, Grauer E, Klein E, Ben-Shachar D (2004) ATF2, a member of the CREB/ATF family of transcription factors, in chronic stress and consequent to antidepressant treatment: animal models and human post-mortem brains. Neuropsychopharmacology 29:589-597.
Maekawa T, Sakura H, Kanei-Ishii C, Sudo T, Yoshimura T, Fujisawa J, Yoshida M, Ishii S (1989) Leucine zipper structure of the protein CRE-BP1 binding to the cyclic AMP response element in brain. EMBO J 8:2023-2028.
Morton S, Davis RJ, Cohen P (2004) Signalling pathways involved in multisite phosphorylation of the

transcription factor ATF2. FEBS Lett 572:177-183.