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AP02332PU-S Polyclonal Antibody to ATF2 pThr71/53 - Aff - Purified

Alternate names: ATF-2, Activating transcription factor 2, CRE-BP1, CREB-2, CREB2, CREBP1, Cyclic AMP-dependent transcription factor ATF-2, Cyclic AMP-responsive element-binding protein 2, HB16, cAMP response element-binding protein CRE-BP1, cAMP-dependent transcription factor ATF-2

Quantity: 50 µg

Concentration: 1.0 mg/ml

Background: ATF2 (Activating Transcription Factor 2, CREBP, HB16, CREB2, TREB7) is a member of the ATF/CREB family of basic region leucine zipper DNA binding proteins that regulates transcription by binding to a consensus cAMP response element (CRE) in the promoter of various viral and cellular genes. Many of these genes are important in cell growth and differentiation, and in stress and immune responses. ATF2 is a nuclear protein that binds DNA as a dimer and can form dimers with members of the ATF/CREB and Jun/Fos families. It is a stronger activator as a heterodimer with cJun than as a homodimer. Several isoforms of ATF2 arise by differential splicing. The stable native full length ATF2 is transcriptionally inactive as a result of an inhibitory direct intramolecular interaction of its carboxy terminal DNA binding domain with the amino terminal transactivation domain. Following dimerization ATF2 becomes a short lived protein that undergoes ubiquitination and proteolysis, seemingly in a protein phosphatase-dependent mechanism. Stimulation of the transcriptional activity of ATF2 occurs following cellular stress induced by several genotoxic agents, inflammatory cytokines, and UV irradiation. This activation requires phosphorylation of two threonine residues in ATF2 by both JNK/SAP kinase and p38 MAP kinase. ATF2 is abundantly expressed in brain.

Uniprot ID: P15336

NCBI: NP_001871.2

GeneID: 1386

Host: Rabbit

Immunogen: The antiserum was produced against synthesized phosphopeptide derived from human ATF-2 around the phosphorylation site of threonine 71 or 53 (T-P-TP-P-T).

Format: **State:** Liquid purified Ig fraction.
Purification: Immunoaffinity chromatography.
Buffer System: Phosphate buffered saline (without Mg2+ and Ca2+), pH 7.4, 150 mM NaCl, 0.02% Sodium Azide and 50% glycerol.

Applications: Suitable for use in Western blot (1:500~1:1000) and Immunohistochemistry (1:50~1:100).
Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.

Specificity:

The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific phosphopeptide. The antibody against non-phosphopeptide was removed by chromatography using non-phosphopeptide corresponding to the phosphorylation site.
ATF-2 (phospho-Thr71 or 53) antibody detects endogenous levels of ATF-2 only when phosphorylated at threonine 71 or 53.
Species: Human, Mouse and Rat.
Other species not tested.

Storage:

Store the antibody (in aliquots) at -20°C.
Avoid repeated freezing and thawing.
Shelf life: One year from despatch.

General Readings:

1. Sevilla A, et al. (2004) J Biol Chem. 279(26):27458-27465.
2. Waetzig G H, et al. (2002) J Immunol. 168(10): 5342-5351.
3. Abdel-Hafiz H A, et al. (1992) Mol Endocrinol. 6: 2079-2089.
4. Gupta S, et al. (1995) Science. 267: 389-393. Van Dam H, et al. (1995) EMBO J. 14(8): 1798-1811.

Pictures:

Figure 1. Immunohistochemical analysis of paraffin-embedded human breast carcinoma tissue using ATF-2 (phospho-Thr71 or 53) antibody.

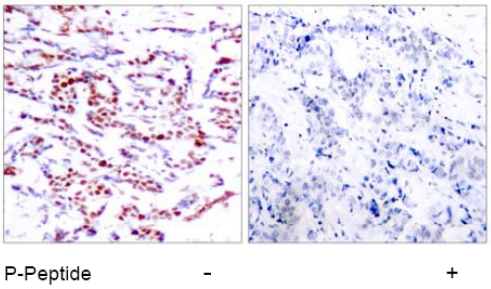

Figure 2. Western blot analysis of extract from HeLa cells, using ATF-2 (phospho-Thr71 or 53) antibody.