

## Product Information

### ANTI-ATF1

Developed in Rabbit  
Affinity Isolated Antibody

Product Number **A 7833**

#### Product Description

Anti-ATF1 is developed in rabbits using a synthetic peptide corresponding to amino acids 6-23 of human ATF1, conjugated to KLH. The antibody is affinity-purified using the immunizing peptide immobilized on agarose.

Anti-ATF1 specifically recognizes human ATF1 by immunoblotting (35-38 kDa). An additional lower molecular weight band may be detected in some preparations. Staining of ATF1 by immunoblotting is inhibited by the immunizing peptide.

ATF1 (Activating Transcription Factor 1, TREB-36) is a member of the ATF/CREB family of basic region leucine-zipper (bZip) DNA-binding proteins that regulates transcription by binding to a consensus cAMP response element (CRE) in the promoter of various viral and cellular genes.<sup>1-4</sup> Many of these genes are important in cell growth and differentiation, and in stress and immune responses. The activation function of CRE-binding proteins may be modulated by phosphorylation of several kinases and is mediated by coactivators such as CREB-binding protein (CBP) and p300. ATF1 is a nuclear protein that binds DNA as a homodimer or as heterodimers with the inducible transcription factors CREB1 or CREM. Heterodimers appear to be stronger transcriptional activators than the homodimers.

Tissue expression of ATF1 mRNA is widespread. Several isoforms of ATF1 arise by differential splicing. ATF1 mediates both Ca<sup>2+</sup> and cAMP responses at several levels. It binds to the Tax-responsive element (TRE1) of the human T-cell lymphotropic virus type-I (HTLV-1).<sup>5</sup> ATF1 is detectable in metastatic melanoma cells and seems to contribute to their survival.<sup>6</sup> A chimeric protein composed of the N-terminal domain of EWS (Ewing sarcoma oncogene) linked to the bZip domain of ATF1 is implicated in the rare malignant clear cell sarcoma of tendon sheath and aponeuroses (malignant melanoma of soft parts).<sup>7, 8</sup>

#### Reagents

The product is supplied in a solution of 0.01 M phosphate buffered saline, pH 7.4, containing 1% bovine serum albumin (BSA) and 15 mM sodium azide.

#### Precautions and Disclaimer

Due to the sodium azide content, a material safety data sheet (MSDS) for this product has been sent to the attention of the safety officer of your institution. Consult the MSDS for information regarding hazardous and safe handling practices.

#### Storage/Stability

For continuous use, store at 2-8 °C for up to one month. For prolonged storage, freeze in working aliquots at -20 °C. Repeated freezing and thawing is not recommended. Storage in "frost-free" freezers is also not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilution samples should be discarded if not used within 12 hours.

#### Product Profile

A minimum working dilution of 1:500 is determined by immunoblotting using a whole extract of human Jurkat acute T cell leukemia cells and a chemiluminescent immunoblotting detection reagent.

Note: In order to obtain best results in different techniques and preparations we recommend determining optimal working dilutions by titration test.

#### References

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