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## Product Information

### **ANTI-AP-1/c-Jun** **Developed in Rabbit,** **Affinity Isolated Antibody**

Product Number **A 5968**

#### **Product Description**

Anti-AP-1/c-Jun is developed in rabbit using a synthetic AP-1/c-Jun C-terminal peptide: Lys-Ser-Pro-Ile-Asp-Met-Glu-Ser-Gln-Glu-Arg-Ile-Lys-Ala-Glu-Arg-Lys-Arg-Met conjugated to KLH with glutaraldehyde. The peptide corresponds to amino acid residues 246-263 of the human c-Jun DNA binding domain with an N-terminal added lysine. The antibody is affinity-isolated using the immunizing peptide immobilized on agarose.

Anti-AP-1/c-Jun recognizes an epitope located on the c-Jun DNA binding domain. This epitope is highly conserved in c-Jun, Jun B and Jun D proteins of chicken, mouse, rat, and human. By immunoblotting, the antibody reacts specifically with AP-1/c-Jun (a single band or occasionally a doublet at 39 kDa region). Additional bands of lower molecular weight may be observed. Staining of AP-1/c-Jun band(s) is inhibited by the AP-1/c-Jun immunizing peptide (amino acid residues 246-263).

Activation Protein transcription factor 1 (AP-1) is a regulatory leucine zipper transcription factor that recognizes a specific sequence (TPA response element, a palindromic TRE sequence TGA(C/G) TCA or related sequences) present in many promoter and enhancer gene regions.<sup>1,2</sup> AP-1 is composed of either a homodimer of two Jun protein molecules or a heterodimer of one Jun and one Fos molecules. Functional heterodimers formed from association of a member of the Fos family with any member of the Jun family (c-Jun, Jun B, Jun D) may display augmented transcriptional activation compared to dimers of the Jun family members. Some ATF/CREB family members can form heterodimers with Fos or Jun family members. Regulation of AP-1 is achieved by changes in the expression of Jun and Fos proteins in the dimer, by phosphorylation at both Ser<sup>63</sup> and Ser<sup>73</sup> by JNK protein kinases and by interaction with a variety of transcriptional coactivators (e.g. JAB1).<sup>3,4,5</sup> AP-1 is

induced by a variety of signals including those eliciting proliferation, differentiation and apoptosis. Jun proteins are also involved in tumor metastasis, inflammation, and response to stress factors and to growth factor withdrawal and to both oxidants and antioxidants.

#### **Reagents**

The product is provided as affinity isolated antibody in 0.01 M phosphate buffered saline, pH 7.4, containing 1% BSA and 15 mM sodium azide as a preservative.

#### **Precautions and Disclaimer**

Due to the sodium azide content a material safety 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 extended storage, freeze in working aliquots. Repeated freezing and thawing is not recommended. Storage in "frost-free" freezers is 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 1:200 is determined by immunoblotting using nuclear extracts of HeLa human epithelioid carcinoma cells.

A minimum working dilution of 1:200 is determined by indirect immunoperoxidase staining of formalin-fixed, paraffin-embedded human colon carcinoma sections.

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

**References**

1. Bohmann, D., et al., Science, **238**, 1386 (1987).
2. Angel, P., et al., Nature, **332**, 166 (1988).
3. Lee, W., et al., Cell, **49**, 741 (1987).
4. Derijard, B., et al., Cell, **76**, 1025 (1994).
5. Kyriakis, J.M., et al., Nature, **369**, 156 (1999)

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