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ProductInformation

ANTI-AP-2α
Developed in Rabbit,
Affinity Isolated Antibody

Product Number **A0844**

Product Description

Anti-AP-2α is developed in rabbit using a synthetic AP-2α C-terminal peptide: Ser-His-Thr-Asp-Asn-Asn-Ala-Lys-Ser-Ser-Asp- Lys-Glu-Glu-Lys-His-Arg-Lys conjugated to KLH with glutaraldehyde. The peptide corresponds to amino acid residues 420-437 of human AP-2α. It differs from the corresponding mouse sequence by one residue and from the chicken sequence by 2 residues. The antibody is affinity-purified using the immunizing peptide immobilized on agarose.

Anti-AP-2α reacts specifically with human AP-2α by immunoblotting (single band at ~50 kD). Staining of the AP-2α band is inhibited by the AP-2α-peptide (amino acid residues 420-437). Using indirect immunofluorescence the antibody stains fixed, cultured cells.

Activation Protein transcription factor 2 (AP-2) is a developmentally regulated transcription factor that recognizes a specific sequence CCCCAGGC or related sequences present in several promoter and enhancer gene regions including the promoters of the AP-2 genes themselves.[1-3] There are three different but highly homologous AP-2 isoforms: α, β, and γ (ERF-1) encoded by three different retinoic acid-responsive genes. Each form of AP-2 possesses the DNA binding domain ("basic helix-span-helix" motif) characteristic of this family of transcription factors.[3] The AP-2 proteins are normally expressed in ectodermally derived vertebrate tissues where they are necessary for normal growth and development. [4-6] The factors have also been implicated in the control of cell proliferation, viral transformation, [7] and oncogenesis [8,9]

AP-2 seems to play in important role in human breast cancer. The proto-oncogene c-erbB-2 is overexpressed in 25-30% of breast cancers due to both increased transcription and gene amplification. The promoter of erbB-2 (HER2/neu) (as well as that of estrogen receptor) has been shown to possess the AP-2 binding site, and AP-2 is expressed in a number of these breast cancer cell lines. [8] Furthermore, all three isoforms of AP-2 have been shown to activate a c-erbB-2 reporter construct, though the alpha and gamma forms are reported to be 3-4 times more effective than the beta form. [9] Characterization of the transcription factor (OB2-1) responsible for the increased transcription of the c-erbB-2 gene seen in these cell lines revealed it to be a combination of AP-2 α, β, and γ proteins.[9]

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 (see MSDS)* as a preservative.

Protein concentration is approximately 1 mg/ml by absorbance at 280 nm.

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 1:250 is determined by immunoblotting using nuclear extract of HeLa human epithelioid carcinoma cells.

A minimum working of 1:100 is determined by indirect immunofluorescent staining of fixed cultured HeLa human epithelioid carcinoma cells.

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

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