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ProductInformation

ANTI-BAF57
Produced in rabbit, Affinity Isolated Antibody

Product Number **B 0436**

Product Description

Anti-BAF57 is developed in rabbit using as immunogen a synthetic peptide corresponding to amino acids 394-411 of human BAF57, conjugated to KLH through a N-terminal added cysteine. This sequence is conserved in mouse. The antibody is affinity purified on the immunizing peptide immobilized on agarose.

Anti-BAF57 recognizes BAF57 by various applications including immunoblotting (57 kDa) and immunofluorescence. Staining of BAF57 in immunoblotting and immunofluorescence is specifically inhibited with the BAF57 immunizing peptide.

Chromatin, the physiological packaging structure of histone proteins and DNA, is considered a key element in regulating gene expression.[1] Several complexes involved in transcriptional regulation, function by either modifying histones or altering chromatin structure. Postranslational modifications of histones such as acetylation, phosphorylation and methylation, contribute to the regulation of transcription.[2-4] The ATP-dependent chromatin-remodeling complexes alter chromatin structure by using the energy of ATP hydrolysis to locally disrupt the association of histones with DNA, displacing the nucleosomes from promoter and enhancer regions, and therefore allowing transcription initiation.[5] Chromatin remodeling complexes have been purified from a variety of organisms, and most cell types contain more than one type of complex. These complexes contain structurally related catalytic subunits, but differ in the way in which they manipulate chromatin.[5,6] Three families of complexes have been described: SWI/SNF, ISWI, and Mi-2.[5-7] The SWI/SNF family of ATP-dependent remodeling complexes was identified in yeast, *Drosophila*, and human. Members of this family cause nucleosomes to change structure and/or position in order to allow transcriptional activators to gain access to their target sites.[8,9] Components of the hSWI/SNF complexes have been implicated in a range of cellular events including gene activation, regulation of cell growth, and development.[10] One of the components of this complex is BAF57 (also known as SWI/SNF related, matrix associated, actin dependent regulator of chromatin, subfamily e, member 1). This component is present only in higher eukaryotes, not in yeast. The 411 amino acids BAF57 contains an HMG domain adjacent to a kinesin-like region. Although experimental evidence have been gathered, no clear function was defined for the protein either alone or as part of the complexes. Thus the protein, either alone or when in the SWI/SNF complex, can bind to 4-way junction DNA, which is thought to mimic the topology of DNA as it enters or exits the nucleosome; disruption of this domain does not abolish the DNA-binding or nucleosome-displacement activities of the SWI/SNF complex.[11] The HMG domain is essential for the T lymphocytes CD4 silencing, and CD8 activation.[12] BAF57 also interacts with the CoREST corepressor resulting in repression of neuronal specific gene promoters in non-neuronal cells.[13] Importantly, BAF57 was lately shown to be esential for regulation of the androgen receptor, which is a main player in the development of cancer progression.[14]

Reagent

The antibody is supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide.

Antibody Concentration: ~1.0 mg/mL

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 extended storage, freeze in working aliquots. 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 dilutions should be discarded if not used within 12 hours.

Product Profile
By immunoblotting, a working antibody concentration of 0.25-0.5 µg/mL is recommended using HeLa nuclear cell extracts.

By indirect immunofluorescence, a working antibody concentration of 5-10 µg/mL is recommended using NIH3T3 cells fixed with paraformaldehyde-triton.

Note: In order to obtain the best results using various techniques and preparations, we recommend determining the optimal working dilutions by titration.

References

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