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# ProductInformation

**Anti-hBrm/hSNF2α (KR-17)**
Developed in Rabbit
Affinity Isolated Antibody

Product Number **H 9787**

## Product Description

Anti-hBrm/hSNF2α (KR-17) is developed in rabbit using as immunogen a synthetic peptide corresponding to amino acids 1354-1370 of human Brm conjugated to maleimide-activated KLH via an N-terminal added cysteine. The antibody is affinity purified using the immunizing peptide immobilized on agarose

Anti-hBrm/hSNF2α (KR-17) recognizes hBrm (230 kDa) by immunoblotting and immunofluorescence. Staining of hBrm in immunoblotting is specifically inhibited with the hBrm 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 the SWI/SNF family, ISWI family, and Mi-2 family.[5-7] The SWI/SNF family of ATP-dependent remodeling complexes was identified in yeast, drosophila, and human. It causes nucleosomes to change structure and/or position in order to allow transcriptional activators to gain access to their target sites.[8, 9] In humans, two conserved ATPase subunits have been identified as hBrm (also designated hSNF2α) and Brg1 (also designated as SNF2β). Brg1 (1,613 amino acids) and hBrm (1,586 amino acids) share approximately 52% identity.[10, 11]

Components of the hSWI/SNF complexes have been implicated in a range of cellular events including gene activation, regulation of cell growth, and development.[12] Brg1 and hBrm enhances transcriptional activation by glucocorticoid receptors.[11] Apparently, Brg1 and Brm complexes direct distinct cellular processes by recruitment to specific promoters through protein-protein interactions that are unique to each ATPase.[13] The remodeling complexes were traditionally associated with transcriptional activation. However, SWI/SNF has been found associated with repressor complexes, such as HDAC (histone deacetylase) and Rb (retinoblastoma) in a complex that leads to cell cycle arrest, suggesting that they are associated with transcriptional repression.[14]

Antibodies reacting specifically with hBrm/SNF2α may be used for studying the effects of chromatin remodeling on gene expression.

## Reagent

Anti-hBrm/hSNF2α (KR-17) is supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide.

Antibody Concentration: Approx. 1 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 hazards 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 dilutions should be discarded if not used within 12 hours.

**Product Profile**
By immunoblotting, a minimum working antibody concentration of 0.15 µg/ml is determined using nuclear extracts of the 293T cell line.

By indirect immunofluorescence, a minimum working antibody concentration of 1 µg/ml is determined using paraformaldehyde/Triton fixed hBrm-transfected 293T cell line.

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

**References**

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