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Product Information

Monoclonal Anti-Brg1 antibody produced in rat
clone 3G4, purified from hybridoma cell culture

Catalog Number **SAB4200641**

Product Description

Monoclonal Anti-Brg1 (rat IgG1 isotype) is derived from the hybridoma 3G4 produced by the fusion of mouse myeloma cells (SP2) and lymph node cells from rat immunized with a synthetic peptide corresponding to a sequence at the C-terminal region of human Brg1 protein (GeneID; 6597).[1] The antibody is purified from culture supernatant of hybridoma cells grown in a bioreactor.

Monoclonal Anti-Brg1 recognizes human and mouse Brg1. The product may be used in several immunochemical techniques including immunoblotting (~185 kDa),flow cytometry and Immunofluorescence.[1] It should be noted that a ~110kDa band may appear at higher concentrations.

Chromatin remodeling proteins have been shown to alter local chromatin structure and facilitate recruitment of essential factors required for transcription. These chromatin-modifying enzymes use energy derived from ATP hydrolysis to actively alter the nucleosomal structure.[2] BRG1 (or hBrm) protein is the central catalytic ATPase of the SWI/SNF chromatin-remodeling complex, which is involved in transcriptional modulation of hormone-responsive promoters through binding of the complex to various nuclear receptors and its recruitment to gene-specific promoters.[3] In addition, BRG1 has also been shown to act as a transcriptional repressor. It interacts with retinoblastoma tumor suppressor to form a repressor complex which inhibits cell cycle proteins such as cyclins A, D1 and E.[4] Furthermore, BRG1 catalytic subunit of mammalian SWI/SNF-related complexes co-localizes with origin recognition complexes, GINS complexes, and proliferating cell nuclear antigen at sites of DNA replication on extended chromatin fibers. The specific pattern of BRG1 occupancy suggests it does not participate in origin selection but is involved in the firing of origins and the process of replication elongation.[5] This novel function of BRG1 is consistent with its requirement during embryogenesis and its role as a tumor suppressor to maintain genome stability and prevent cancer.[3,5]

Reagent

Supplied as a solution in 0.01M phosphate buffered saline pH 7.4, containing 15 mM sodium azide.
Antibody Concentration: ~ 1.0 mg/mL

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

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

Product Profile

Immunoblotting: a working dilution of 0.1-0.2 µg/mL is recommended using HeLa nuclear extract.

Immunofluorescence: a working concentration of 10 µg/mL is recommended using HeLa cells.

Flow Cytometry: a working dilution of 2.5-5 µg /test is recommended using HeLa cells.

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

References

1. Ohkawa Y., et al., *Hybridoma (Larchmt).*, **28**, 463-466 (2009).
2. Eberharter, A. and Becker, P.B., *J. Cell. Sci.,***117**, 3707-3711 (2004).
3. Trotter, W.K., and Archer, T.K., *Nucl. Recept. Signal.,* **6,** e004 1-12 (2006).
4. Zhang, H.S., et al., *Cell*, **101**, 79-89 (2000).
5. Cohen, S.M., et al., *Nucleic Acid Res.,* **28**, 6906-6919 (2010).

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