Data sheet

Jena Bioscience

BRG1
(Brahma-related Gene 1 Protein, wild type)
Human, Recombinant, Sf9 insect cells

Cat. No.	Amount
PR-740	5 µg

Liquid. Supplied as a 0.25 mg/ml solution in 20 mM Tris-HCl, pH 7.9, 100 mM KCl, 0.2 mM EDTA, 1 mM DTT, 20 % glycerol.

The wild type human brahma-related gene 1 (Brg1) encodes a protein of 1,647 amino acids that contains a conserved domain of the SWI2/SNF2 family necessary for normal mitotic growth and transcription regulation. BRG1 is an essential component of the SWI/SNF chromatin remodeling complexes and implicated in multiple functions through its interaction with different proteins, including the tumor suppressor protein pRb, serine-threonine kinase LKB1, and other transcription factors. Although Brg1 involves in chromatin remodeling as complexes with other SWI/SNF proteins, purified BRG1 itself is capable of remodeling mononucleosomes and nucleosomal arrays *in vitro*. Mutations of Brg1 have been found in multiple tumor cell lines.
The wild type human BRG1 was expressed in baculovirus system and purified by an affinity column in combination with FPLC chromatography.
Recombinant BRG1 can be used 1) for protein-protein interaction assay; 2) for *in vitro* transcription assay; 3) for *in vitro* nucleosome remodeling assay; and 4) for cell growth assay.
Purified protein is greater than 95% homogeneous and contains no detectable proteases, DNase, and RNase activity.

Unit definition:
50-100 units (ng) are required for in vitro nucleosome remodeling assay and 100 units are required for a protein-protein interaction assay.

AVOID FREEZE/THAW CYCLES.

For in vitro use only!

Purity: > 95% by SDS-PAGE.

Store: -80 °C

Selected References:

Khavari *et al.* (1993) BRG1 contains a conserved domain of the SWI2/SNF2 family necessary for normal mitotic growth and transcription. *Nature* **366**:170.

Fryer C.J. and Archer T.K. (1998) Chromatin remodelling by the glucocorticoid receptor requires the BRG1 complex. *Nature* **393**:88.

Sif *et al.* (1998) Mitotic inactivation of a human SWI/SNF chromatin remodeling complex. *Genes Dev.* **12**:2842.

Dunaief *et al.* (1994) The retinoblastoma protein and BRG1 form a complex and cooperate to induce cell cycle arrest. *Cell* **79**:119.

Marignani *et al.* (2001) LKB1 associates with Brg1 and is necessary for Brg1-induced growth arrest. *J. Biol. Chem.* **276**:32415.

Brockmann *et al.* (2001) The histone acetyltransferase activity of PCAF cooperates with the brahma/SWI2-related protein BRG-1 in the activation of the enhancer A of the MHC class I promoter. *Gene* **277**:111.

Barker *et al.* (2001) The chromatin remodelling factor Brg-1 interacts with beta-catenin to promote target gene activation. *EMBO J.* **20**:4935.

Phelan *et al.* (1999) Reconstitution of a core chromatin remodeling complex from SWI/SNF subunits. *Mol. Cell* **3**:247.

Wong *et al.* (2000) BRG1, a component of the SWI-SNF complex, is mutated in multiple human tumor cell lines. *Cancer Res.* **60**:6171.