

BRG1-mt

Brahma-related Gene 1 Protein, K798R

human, recombinant, Sf9 insect cells

Cat. No.	Amount
PR-741	5 µg

For *in vitro* use only
Quality guaranteed for 12 months
Store at -80°C

Avoid freeze / thaw cycles

Form

Liquid. Supplied in 20 mM Tris-HCl, pH 7.9, 100 mM KCl, 0.2 mM EDTA, 1 mM DTT, 20 % glycerol.

Activity

100 ng are required for a protein-protein interaction assay.

Application

Recombinant BRG1 (K798R) 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.

Purity

> 95% by SDS-PAGE.

Description

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. Mutation of lysine to arginine at position 798 in the DNA-dependent ATPase domain of BRG1

- a) failed to restore normal growth to *swi2*-cells,
- b) reduced its ability to repress *c-fos* transcription and
- c) reduced CIITA (class II transactivator) induction and enhanced the rate of induction of the interferon- γ -responsive GBP-1 gene.

The mutant human BRG1 (K798R) was expressed in baculovirus system and purified by an affinity column in combination with FPLC chromatography.

Purified protein is greater than 95% homogeneous and contains no detectable proteases, DNase, and RNase activity.

Selected References:

- 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.
- Khavari *et al.* (1993) BRG1 contains a conserved domain of the SWI2/SNF2 family necessary for normal mitotic growth and transcription. *Nature* **366**:170.
- Murphy *et al.* (1999) Human SWI-SNF component BRG1 represses transcription of the *c-fos* gene. *Mol. Cell. Biol.* **19**:2724.
- Pattenden *et al.* (2002) Interferon-gamma-induced chromatin remodeling at the CIITA locus is BRG1 dependent. *EMBO J.* **21**:1978.