

## Recombinant SMARCA2 (636-1131) protein

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**Catalog No:** 81439, 81539

**Expressed In:** Baculovirus

**Quantity:** 20, 1000 µg

**Concentration:** 0.6 µg/µl

**Source:** Human

**Buffer Contents:** Recombinant SMARCA2 (636-1131) protein is supplied in 25 mM HEPES-NaOH pH 7.5, 300 mM NaCl, 10% glycerol, 0.04% Triton X-100, 0.5 mM TCEP.

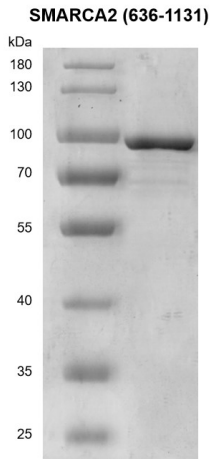
**Background:** **SWI/SNF related, matrix associated, actin dependent regulator of chromatin, subfamily a, member 2 (SMARCA2)**, also known as **BRM**, is a member of the SWI/SNF family of proteins and is similar to the Brahma protein of *Drosophila*. Members of this family have helicase and ATPase activities and are thought to regulate transcription of certain genes by altering the chromatin structure around those genes. SMARCA2 contains bromodomains for interaction with other proteins. The bromodomain functions as a 'reader' of epigenetic histone marks and regulates chromatin structure and gene expression by linking associated proteins to the recognized acetylated nucleosomal targets. SMARCA2 is involved in vitamin D-coupled transcription regulation via its association with the WINAC complex, a chromatin-remodeling complex recruited by vitamin D receptor (VDR). SMARCA1 belongs to the neural progenitors-specific chromatin remodeling complex (npBAF complex) and the neuron-specific chromatin remodeling complex (nBAF complex). SMARCA2 plays a pivotal role in the regulation of the switch in subunit composition of the npBAF and nBAF complexes as cells transition from proliferating neural stem/progenitor cells to post-mitotic neurons during neural development. It shows binding specificity for acetylated H3K9, H3K14, H3K9/14, H4K8, H4K12, H4K16 and H4K5/8/12/16.

**Protein Details:** Recombinant SMARCA2 protein that includes amino acids 636-1131 of human SMARCA2 protein (accession number NP\_001276325.1) was expressed in a baculovirus expression system, and contains an N-terminal FLAG tag. The molecular weight of the protein is 82.5 kDa.

**Application Notes:** This product was manufactured as described in Protein Details. Where possible, Active Motif has developed functional or activity assays for recombinant proteins. Additional characterization such as enzyme kinetic activity assays, inhibitor screening or other biological activity assays may not have been performed for every product. All available data for a given product is shown on the lot-specific Technical Data Sheet.

**Storage and Guarantee:** Recombinant proteins in solution are temperature sensitive and must be stored at -80°C to prevent degradation. Avoid repeated freeze/thaw cycles and keep on ice when not in storage. This product is guaranteed for 6 months from date of receipt.

This product is for research use only and is not for use in diagnostic procedures.

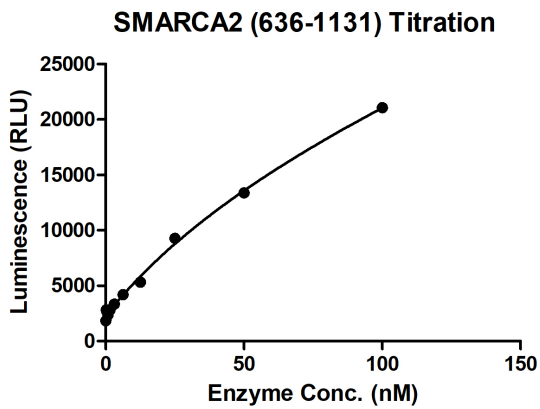


### Recombinant SMARCA2 (636-1131) protein

10% SDS-PAGE Coomassie staining

MW: 82.5 kDa

Purity:  $\geq 90\%$



### ADP-Glo assay for SMARCA (636-1131) activity (Data from ICEB Bioscience Inc.)

100  $\mu$ M ATP and 10 nM DNA was incubated with different concentrations of SMARCA2 (636-1131) protein in a 10  $\mu$ l reaction system containing 20 mM HEPES pH 7.5, 10 mM MgCl<sub>2</sub>, 50 mM NaCl, 0.1% Tween-20, 1 mM DTT for 1 hour, 10  $\mu$ l ADP-Glo Reagent was added to the products and incubated for 1 hour. Then 20  $\mu$ l Kinase Detection Reagent incubated for 1 hour. All the operations and reactions were performed at RT. Luminescence measurement is collected by BMG.