Revision 2

Store at -20C

#58214

BAF Complex Antibody Sampler Kit II

1 Kit (7 x 20 microliters)

Cell Signaling TECHNOLOGY®

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For Research Use Only. Not for Use in Diagnostic Procedures.

Product Includes	Product #	Quantity	Mol. Wt	Isotype/Source
ARID1A/BAF250A (D2A8U) Rabbit mAb	12354	20 µl	270 kDa	Rabbit IgG
ARID1B/BAF250B (E9J4T) Rabbit mAb	92964	20 µl	250, 280 kDa	Rabbit IgG
Brg1 (D1Q7F) Rabbit mAb	49360	20 µl	220 kDa	Rabbit IgG
BRM (D9E8B) XP® Rabbit mAb	11966	20 µl	200 kDa	Rabbit IgG
SMARCC1/BAF155 (D7F8S) Rabbit mAb	11956	20 µl	155 kDa	Rabbit IgG
SMARCC2/BAF170 (D8O9V) Rabbit mAb	12760	20 µl	162, 170 kDa	Rabbit IgG
SMARCE1/BAF57 (E6H5J) Rabbit mAb	33360	20 µl	57 kDa	Rabbit IgG
Anti-rabbit IgG, HRP-linked Antibody	7074	100 µl		Goat

Please visit cellsignal.com for individual component applications, species cross-reactivity, dilutions, protocols, and additional product information.

Description

The BAF Complex Antibody Sampler Kit II provides an economical means of detecting levels of various BAF complex components. The kit contains enough primary antibodies to perform at least two western blot experiments.

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at –20°C. Do not aliquot the antibody.

Background

ATP-dependent chromatin remodeling complexes play an essential role in the regulation of various nuclear processes, such as gene expression, DNA replication, and repair (1,2). The SWI/SNF chromatin remodeling complex consists of more than 10 subunits with a single molecule of the ATPase catalytic subunit BRM or BRG1, but not both. The activities of these two subunits drive the disruption of histone-DNA contacts that lead to changes in accessibility of crucial regulatory elements within chromatin (2-5). The BRM/BRG1 containing SWI/SNF complexes are recruited to target promoters by transcription factors, such as nuclear receptors, p53, RB, and BRCA1 to regulate gene activation, cell growth, the cell cycle, and differentiation processes (1,6-9). BRM and BRG1 are also considered to be tumor suppressors and their expression levels are severely reduced in several cancer cell lines (10-13). SMARCC1/BAF155, SMARCC2/BAF170, and SMARCB1/BAF47 are members of the core subunits of the SWI/SNF complex, which is necessary for efficient nucleosome remodeling by BRG1 *in vitro* (14). ARID1A/BAF250A and ARID1B/BAF250B are DNA-binding members of the complex. They are highly homologous and mutually exclusive, with ARID1B/BAF250B being a critical vulnerability in ARID1A/BAF250A mutant cancers (15-17). SMARCC1, SMARCB1, and ARID1A are an essential part of the mouse embryonic stem cell specific SWI/SNF complex (esBAF). SMARCC1 is necessary for early embryogenesis, especially proper brain and visceral endoderm development (18-20). SMARCB1 is necessary for early embryogenesis and hepatocyte differentiation (21,22). ARID1A is critical for embryonic stem (ES) cell pluripotency and differentiation into mesoderm-derived cardiomyocytes and adipocytes (15). While SMARCC2 has been shown to be part of the SWI/SNF complex in non-pluripotent cells, it is absent in pluripotent ES cells. Expression of SMARCC2 has been shown to be up-regulated in neurons/neuronal progenitors upon differentiation of mouse ES cells with retinoic acid, and exogenous expression of SMARCC2 leads to loss of stem cell pluripotency and self renewal (23).

Background References

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