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.

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 differ in 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, leading to loss of stem cell pluripotency and self renewal (23). 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).

Specificity/Sensitivity: Each antibody in the BAF Complex Antibody Sampler Kit II recognizes endogenous levels of its specific target.