



Brgl Antibody

E2200282

For Research Use Only

Catalog Number: E2200282

Size: 100ug

Host: Mouse

Order: order@enogene.com Support: service@enogene.com Web: www.enogene.com
Formulation: 0.1mg/ml purified mouse monoclonal antibody containing 0.1M Tris-Glycine (pH 7.4, 150 mM NaCl)

with 0.2% sodium azide, 50% glycerol

Sensitivity: This antibody detects endogenous levels of SMARCA4 and does not cross-react with related proteins.

Entrez summary: The protein encoded by this gene 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. The encoded protein is part of the large ATP-dependent chromatin remodeling complex SNF/SWI, which is required for transcriptional activation of genes normally repressed by chromatin. In addition, this protein can bind BRCA1, as well as regulate the expression of the tumorigenic protein CD44. Multiple transcript variants encoding different isoforms have been found for this gene

UniPort summary Transcriptional coactivator cooperating with nuclear hormone receptors to potentiate

Function: transcriptional activation. Component of the CREST-BRG1 complex, a multiprotein complex that regulates promoter activation by orchestrating a calcium-dependent release of a repressor complex and a recruitment of an activator complex. In resting neurons, transcription of the c-FOS promoter is inhibited by BRG1-dependent recruitment of a phospho-RB1-HDAC repressor complex. Upon calcium influx, RB1 is dephosphorylated by calcineurin, which leads to release of the repressor complex. At the same time, there is increased recruitment of CREBBP to the promoter by a CREST-dependent mechanism, which leads to transcriptional activation. The CREST-BRG1 complex also binds to the NR2B promoter, and activity-dependent induction of NR2B expression involves a release of HDAC1 and recruitment of CREBBP. Belongs to the neural progenitors-specific chromatin remodeling complex (npBAF complex) and the neuron-specific chromatin remodeling complex (nBAF complex). During neural development a switch from a stem/progenitor to a post-mitotic chromatin remodeling mechanism occurs as neurons exit the cell cycle and become committed to their adult state. The transition from proliferating neural stem/progenitor cells to post-mitotic neurons requires a switch in subunit composition of the npBAF and nBAF complexes. As neural progenitors exit mitosis and differentiate into neurons, npBAF complexes which contain ACTL6A/BAF53A and PHF10/BAF45A, are exchanged for homologous alternative ACTL6B/BAF53B and DPF1/BAF45B or DPF3/BAF45C subunits in neuron-specific complexes (nBAF). The npBAF complex is essential for the self-renewal/proliferative capacity of the multipotent neural stem cells. The nBAF complex along with CREST plays a role regulating the activity of genes essential for dendrite growth. SMARCA4/BAF190A may promote neural stem cell self-renewal/proliferation by enhancing Notch-dependent proliferative signals, while concurrently making the neural stem cell insensitive to SHH-dependent differentiating cues By similarity. Also involved in vitamin D-coupled transcription regulation via its association with the WINAC complex, a chromatin-remodeling complex recruited by vitamin D receptor (VDR), which is required for the ligand-bound VDR-mediated transrepression of the CYP27B1 gene. Acts as a corepressor of ZEB1 to regulate E-cadherin transcription and is required for induction of epithelial-mesenchymal transition (EMT) by ZEB1.

Immunogen: Purified recombinant human SMARCA4 protein fragments expressed in E.coli.

Antibody Type: Monoclonal antibody

Isotype: IgG1

Purified method: Affinity purified

Subcellular location: Nucleus

Reactivity: H,

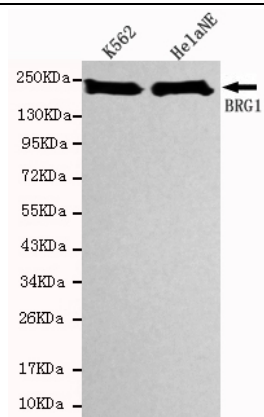
Applications: WB

Molecular Weight: 235kDa

UniProt number: P51532

GeneBank ID: NM_001128844

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Western blot detection of SMARCA4 in K562&HeLaNE cell lysates using SMARCA4 antibody (1:1000 diluted). Predicted band size: 235KDa Observed band size: 235KDa.