10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

ARID1B Rabbit pAb

Catalog # AP98915

Product Information

Application	IHC-P, IHC-F, IF
Primary Accession	Q8NFD5
Other Accession	Q8NFD5
Reactivity	Mouse
Predicted	Rat, Human, Chicken, Dog, Sheep
Host	Rabbit
Clonality	Polyclonal
Calculated MW	243943
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human ARID1B
Epitope Specificity	1501-1600/2236
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Contains 1 ARID domain.
SUBUNIT	Component of SWI/SNF chromatin remodeling complexes, in some of which it can be mutually exclusive with ARID1A/BAF250A. Component of the BAF (SWI/SNF-A) complex, which includes at least actin (ACTB), ARID1A, ARID1B/BAF250, SMARCA2, SMARCA4/BRG1/BAF190A, ACTL6A/BAF53, ACTL6B/BAF53B, SMARCE1/BAF57, SMARCC1/BAF155, SMARCC2/BAF170, SMARCB1/SNF5/INI1, and one or more of SMARCD1/BAF60A, SMARCD2/BAF60B, or SMARCD3/BAF60C. In muscle cells, the BAF complex also contains DPF3. Component of the SWI/SNF-B (PBAF) complex, at least composed of SMARCA4/BRG1/BAF190A, SMARCB1/BAF47, ACTL6A/BAF53A or ACTL6B/BAF53B, SMARCE1/BAF57, SMARCD1/BAF60A, SMARCD2/BAF60B, perhaps SMARCD3/BAF60C, SMARCC1/BAF155, SMARCC2/BAF170, PB1/BAF180, ARID2/BAF200, ARID1A/BAF250A or ARID1B/BAF250B and actin. Component of a SWI/SNF-like EPAFb complex, at least composed of SMARCA4/BRG1/BAF190A, SMARCB1/BAF47, ACTL6A/BAF53A, SMARCE1/BAF57, SMARCD1/BAF60A, SMARCD2/BAF60B, SMARCC1/BAF155, SMARCC2/BAF170, ARID1B/BAF250B, MLLT1/ENL and actin. Component of a SWI/SNF-like complex containing ARID1A/BAF250A and ARID1B/BAF250B. Interacts through its C-terminus with SMARCA2/BRM/BAF190B and SMARCA4/BRG1/BAF190A. Interacts with SMARCC1/BAF155. Component of neural progenitors-specific chromatin remodeling complex (npBAF complex) composed of at least, ARID1A/BAF250A or ARID1B/BAF250B, SMARCD1/BAF60A, SMARCD3/BAF60C, SMARCA2/BRM/BAF190B, SMARCA4/BRG1/BAF190A, SMARCB1/BAF47, SMARCC1/BAF155, SMARCE1/BAF57, SMARCC2/BAF170, PHF10/BAF45A, ACTL6A/BAF53A and actin. Component of neuron-specific chromatin remodeling complex (nBAF complex) composed of at least, ARID1A/BAF250A or ARID1B/BAF250B, SMARCD1/BAF60A, SMARCD3/BAF60C, SMARCA2/BRM/BAF190B, SMARCA4/BRG1/BAF190A, SMARCB1/BAF47, SMARCC1/BAF155, SMARCE1/BAF57, SMARCC2/BAF170, DPF1/BAF45B, DPF3/BAF45C, ACTL6B/BAF53B and actin (By similarity).

DISEASE	Defects in ARID1B are the cause of mental retardation autosomal dominant type 12 (MRD12) [MIM:614562]. A disorder characterized by significantly below average general intellectual functioning associated with impairments in adaptative behavior and manifested during the developmental period. MRD12 patients present with moderate to severe psychomotor retardation, and most show evidence of muscular hypotonia. In many patients, expressive speech is more severely affected than receptive function. Additional common findings include short stature, abnormal head shape and low-set, posteriorly rotated, and abnormally shaped ears, downslanting palpebral fissures, a bulbous nasal tip, a thin upper lip, minor teeth anomalies, and brachydactyly or single palmar creases. Autistic features are uncommon.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	The SWI-SNF complex is involved in the activation of transcription via the remodeling of nucleosome structure in an ATP-dependent manner. Brm (also designated SNF2 alpha) and Brg-1 (also designated SNF2 beta) are the ATPase subunits of the mammalian SWI-SNF complex. Brm, Brg-1, Ini1 (integrase interactor 1, also designated SNF5), BAF155 (also designated SRG3) and BAF170 are thought to comprise the functional core of the SWI-SNF complex. Addition of Ini1, BAF155 and BAF170 to Brg-1 appears to increase remodeling activity. Other complex subunits, such as BAF250 (p270 or ARID 1A) and BAF250b(ARID1B), are thought to play regulatory roles.

Additional Information

Gene ID	57492
Other Names	6A3-5; BAF250B; BRIGHT; CSS1; DAN15; ELD/OSA1; MRD12; OSA2; P250R; SMARCF2; ARI1B_HUMAN; ARID1B; ARID domain-containing protein 1B; BRG1-associated factor 250b (BAF250B); BRG1-binding protein hELD/OSA1; Osa homolog 2 (hOsa2); KIAA1235; AT-rich interaction domain 1B; AT rich interactive domain 1B (SWI1-like)
Dilution	IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	ARID1B (HGNC:18040)
Function	Involved in transcriptional activation and repression of select genes by chromatin remodeling (alteration of DNA-nucleosome topology). Component of SWI/SNF chromatin remodeling complexes that carry out key enzymatic activities, changing chromatin structure by altering DNA-histone contacts within a nucleosome in an ATP-dependent manner. 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 postmitotic 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 postmitotic 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 (By similarity). Binds DNA non-specifically (PubMed:14982958, PubMed:15170388).
Cellular Location	Nucleus {ECO:0000255|PROSITE-ProRule:PRU00355, ECO:0000269|PubMed:11988099}
Tissue Location	Widely expressed with high levels in heart, skeletal muscle and kidney.

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