SANTA CRUZ BIOTECHNOLOGY, INC.

ARID1B (KMN1): sc-32762

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

BAF250b (BRG1-associated factor 250b), also known as ARID1B (AT-rich interactive domain-containing protein 1B) or hOsa2 (Osa homolog 2), is a 2,236 amino acid protein that contains one ARID domain. BAF250b has a BC box motif, associates with elongin C in a BC box-dependent manner, and, together with Cullin 2 and Roc1, assembles into an E3 ubiquitin ligase that participates in ubiquitination of Histone H2B. Smad2 and Smad3 interact with BRG1, BAF250b, BAF170 and BAF155, which are core components of the SWI/SNF chromatin-remodeling complex. Localizing to nucleus, BAF250b is widely expressed with high levels in heart, skeletal muscle and kidney. The BAF250b gene is conserved in chimpanzee, canine, mouse, rat, chicken, zebrafish, mosquito and *C. elegans,* and maps to human chromosome 6q25.3. BAF250b exists as three alternatively spiced isoforms.

CHROMOSOMAL LOCATION

Genetic locus: ARID1B (human) mapping to 6q25.3; Arid1b (mouse) mapping to 17 A1.

SOURCE

ARID1B (KMN1) is a mouse monoclonal antibody raised against a fusion protein including amino acids 1-422 of ARID1B of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-32762 X, 200 µg/0.1 ml.

ARID1B (KMN1) is available conjugated to agarose (sc-32762 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-32762 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-32762 PE), fluorescein (sc-32762 FITC), Alexa Fluor® 488 (sc-32762 AF488), Alexa Fluor® 546 (sc-32762 AF546), Alexa Fluor® 594 (sc-32762 AF594) or Alexa Fluor® 647 (sc-32762 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-32762 AF680) or Alexa Fluor® 790 (sc-32762 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

ARID1B (KMN1) is recommended for detection of ARID1B of mouse, rat and human origin by Western Blotting (starting dilution 1:25, dilution range 1:25-1:100) and immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)].

Suitable for use as control antibody for ARID1B siRNA (h): sc-43571, ARID1B siRNA (m): sc-43572, ARID1B shRNA Plasmid (h): sc-43571-SH, ARID1B shRNA Plasmid (m): sc-43572-SH, ARID1B shRNA (h) Lentiviral Particles: sc-43571-V and ARID1B shRNA (m) Lentiviral Particles: sc-43572-V.

ARID1B (KMN1) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

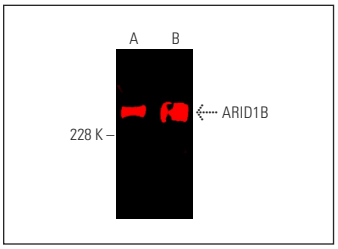
Molecular Weight of ARID1B: 165-320 kDa.

Positive Controls: Y79 cell lysate: sc-2240, MCF7 whole cell lysate: sc-2206 or SH-SY5Y cell lysate: sc-3812.

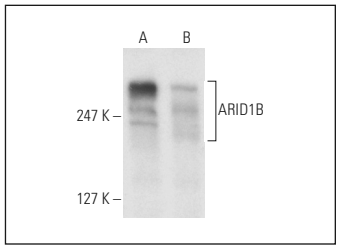
STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

DATA



ARID1B (KMN1): sc-32762. Near-infrared western blot analysis of ARID1B expression in Y79 (**A**) and SH-SY5Y (**B**) whole cell lysates. Blocked with UltraCruz® Blocking Reagent: sc-516214. Detection reagent used: m-IgGκ BP-CFL 790: sc-516181.



ARID1B (KMN1): sc-32762. Western blot analysis of ARID1B expression in Y79 (**A**) and SH-SY5Y (**B**) whole cell lysates. Note presence of ARID1B degradation products.

SELECT PRODUCT CITATIONS

1. Li, X.S., et al. 2010. Mammalian SWI/SNF—a subunit BAF250/ARID1 is an E3 ubiquitin ligase that targets Histone H2B. Mol. Cell. Biol. 30: 1673-1688.
2. Backx, L., et al. 2011. A balanced translocation t(6;14)(q25.3;q13.2) leading to reciprocal fusion transcripts in a patient with intellectual disability and agenesis of corpus callosum. Cytogenet. Genome Res. 132: 135-143.
3. Xu, F., et al. 2012. Essential role of ARID2 protein-containing SWI/SNF complex in tissue-specific gene expression. J. Biol. Chem. 287: 5033-5041.
4. Chandler, R.L., et al. 2013. ARID1A-DNA interactions are required for promoter occupancy by SWI/SNF. Mol. Cell. Biol. 33: 265-280.
5. Sim, J.C., et al. 2014. Expanding the phenotypic spectrum of ARID1B-mediated disorders and identification of altered cell-cycle dynamics due to ARID1B haploinsufficiency. Orphanet J. Rare Dis. 9: 43.
6. Laurette, P., et al. 2015. Transcription factor MITF and remodeller BRG1 define chromatin organisation at regulatory elements in melanoma cells. Elife 4: e06857.
7. Sun, X., et al. 2016. Suppression of the SWI/SNF component ARID1A promotes mammalian regeneration. Cell Stem Cell 18: 456-466.
8. Mathur, R., et al. 2017. ARID1A loss impairs enhancer-mediated gene regulation and drives colon cancer in mice. Nat. Genet. 49: 296-302.
9. Wilson, M.R., et al. 2019. ARID1A and PI3-kinase pathway mutations in the endometrium drive epithelial transdifferentiation and collective invasion. Nat. Commun. 10: 3554.
10. Shi, H., et al. 2020. ARID1A loss in neuroblastoma promotes the adrenergic-to-mesenchymal transition by regulating enhancer-mediated gene expression. Sci. Adv. 6: eaaz3440.

RESEARCH USE

For research use only, not for use in diagnostic procedures.