

ARID3A (A-4): sc-398367

BACKGROUND

ARID3A, also known as DRIL1 in humans and Bright (for B cell regulator of IgH transcription) in mice, are the mammalian homologs of the *Drosophila* Dri (dead ringer) protein. ARID3A is developmentally regulated and is expressed in a restricted set of cells, including differentiating cells of the gut and salivary glands. ARID3A represents a member of a unique family of transcriptional activators that shares sequence similarity to proteins of SWI/SNF complexes; it contains an A/T-rich DNA-binding (ARID) domain and a distinct domain involved in tetramerization. The gene encoding ARID3A is linked to a marker of Peutz-Jeghers syndrome, which is an autosomal-dominant disorder characterized by melanocytic macules of the lips, multiple gastrointestinal hamartomatous polyps and an increased risk for various neoplasms, including gastrointestinal cancer. E2FBP1 (E2F-1 binding protein 1) is identical to ARID3A in the carboxy-terminal region. E2FBP1 appears to lack DNA binding and transactivation domains, and it functions to regulate the transcription of proteins involved in cell proliferation by binding to the transcription factor E2F-1.

REFERENCES

- DeGregori, J., et al. 1995. E2F-1 accumulation bypasses a G₁ arrest resulting from the inhibition of G₁ cyclin-dependent kinase activity. *Genes Dev.* 9: 2873-2887.
- Herrscher, R.F., et al. 1995. The immunoglobulin heavy-chain matrix-associating regions are bound by Bright: a B cell-specific *trans*-activator that describes a new DNA-binding protein family. *Genes Dev.* 9: 3067-3082.

CHROMOSOMAL LOCATION

Genetic locus: ARID3A (human) mapping to 19p13.3; Arid3a (mouse) mapping to 10 C1.

SOURCE

ARID3A (A-4) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 565-592 at the C-terminus of ARID3A of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ 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-398367 X, 200 µg/0.1 ml.

ARID3A (A-4) is available conjugated to agarose (sc-398367 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-398367 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398367 PE), fluorescein (sc-398367 FITC), Alexa Fluor[®] 488 (sc-398367 AF488), Alexa Fluor[®] 546 (sc-398367 AF546), Alexa Fluor[®] 594 (sc-398367 AF594) or Alexa Fluor[®] 647 (sc-398367 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-398367 AF680) or Alexa Fluor[®] 790 (sc-398367 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-398367 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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APPLICATIONS

ARID3A (A-4) is recommended for detection of ARID3A of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

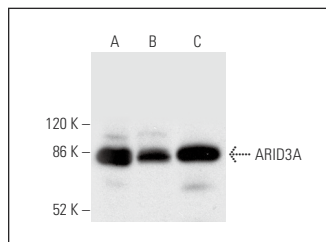
Suitable for use as control antibody for ARID3A siRNA (h): sc-35222, ARID3A siRNA (m): sc-35223, ARID3A shRNA Plasmid (h): sc-35222-SH, ARID3A shRNA Plasmid (m): sc-35223-SH, ARID3A shRNA (h) Lentiviral Particles: sc-35222-V and ARID3A shRNA (m) Lentiviral Particles: sc-35223-V.

ARID3A (A-4) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

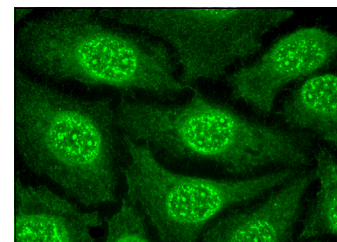
Molecular Weight of ARID3A: 80 kDa.

Positive Controls: K-562 nuclear extract: sc-2130, Hep G2 cell lysate: sc-2227 or IB4 whole cell lysate: sc-364780.

DATA



ARID3A (A-4): sc-398367. Western blot analysis of ARID3A expression in K-562 nuclear extract (A) and IB4 (B) and Hep G2 (C) whole cell lysates.



ARID3A (A-4): sc-398367. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear and cytoplasmic localization.

SELECT PRODUCT CITATIONS

- Schmidt, C., et al. 2021. Lipid rafts interaction of the ARID3A transcription factor with Ezrin and G-Actin regulates B-cell receptor signaling. *Diseases* 9: 22.
- You, X., et al. 2022. MiRNA let-7 family regulated by NEAT1 and ARID3A/NFκB inhibits PRRSV-2 replication *in vitro* and *in vivo*. *PLoS Pathog.* 18: e1010820.
- Liu, X., et al. 2024. NMF typing and machine learning algorithm-based exploration of preeclampsia-related mechanisms on ferroptosis signature genes. *Cell Biol. Toxicol.* 41: 14.

STORAGE

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

RESEARCH USE

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