

# ARID3A (4D6): sc-101030

## 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 G<sub>1</sub> arrest resulting from the inhibition of G<sub>1</sub> 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.
- Zong, R.T. and Scheuermann, R.H. 1995. Mutually exclusive interaction of a novel matrix attachment region binding protein and the NF- $\mu$ NR enhancer repressor. Implications for regulation of immunoglobulin heavy chain expression. *J. Biol. Chem.* 270: 24010-24018.
- Gregory, S.L., et al. 1996. Characterization of the dead ringer gene identifies a novel, highly conserved family of sequence-specific DNA-binding proteins. *Mol. Cell. Biol.* 16: 792-799.
- Amos, C.I., et al. 1997. Fine mapping of a genetic locus for Peutz-Jeghers syndrome on chromosome 9p. *Cancer Res.* 57: 3653-3656.

## CHROMOSOMAL LOCATION

Genetic locus: ARID3A (human) mapping to 19p13.3.

## SOURCE

ARID3A (4D6) is a mouse monoclonal antibody raised against recombinant ARID3A of human origin.

## PRODUCT

Each vial contains 100  $\mu$ g IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## STORAGE

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

## APPLICATIONS

ARID3A (4D6) is recommended for detection of ARID3A of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (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 shRNA Plasmid (h): sc-35222-SH and ARID3A shRNA (h) Lentiviral Particles: sc-35222-V.

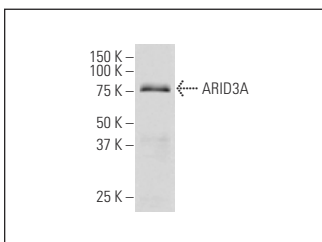
Molecular Weight of ARID3A: 80 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203.

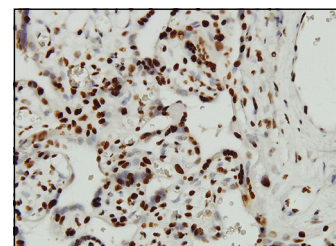
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgG $\kappa$  BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

## DATA



ARID3A (4D6): sc-101030. Western blot analysis of ARID3A expression in K-562 whole cell lysate.



ARID3A (4D6): sc-101030. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human placenta tissue showing nuclear localization.

## SELECT PRODUCT CITATIONS

- Boreström, C., et al. 2012. E2F1, ARID3A/Bright and Oct-2 factors bind to the Epstein-Barr virus C promoter, EBNA1 and oriP, participating in long-distance promoter-enhancer interactions. *J. Gen. Virol.* 93: 1065-1075.

## RESEARCH USE

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