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# #92964

# ARID1B/BAF250B (E9J4T) Rabbit mAb

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**Entrez-Gene ID** #57492
**UniProt ID** #Q8NFD5

**For Research Use Only. Not For Use In Diagnostic Procedures.**

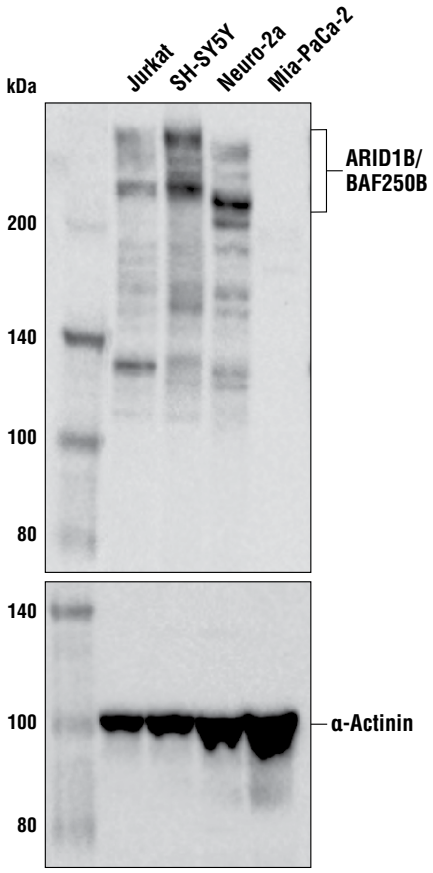
| Applications | Species Cross-Reactivity* | Molecular Wt. | Isotype |
|---|---|---|---|
| W, IP, ChIP, ChIP-seq Endogenous | H, M | 250, 280 kDa | Rabbit IgG** |

**Background:** ATP-dependent chromatin remodeling complexes play an essential role in the regulation of nuclear processes such as transcription and DNA replication and repair (1,2). The SWI/SNF chromatin remodeling complex consists of more than 10 subunits and contains a single molecule of either BRM or BRG1 as the ATPase catalytic subunit. The activity of the ATPase subunit disrupts histone-DNA contacts and changes the accessibility of crucial regulatory elements to the chromatin. The additional core and accessory subunits play a scaffolding role to maintain stability and provide surfaces for interaction with various transcription factors and chromatin (2-5). The interactions between SWI/SNF subunits and transcription factors, such as nuclear receptors, p53, Rb, BRCA1, and MyoD, facilitate recruitment of the complex to target genes for regulation of gene activation, cell growth, cell cycle, and differentiation processes (1,6-9).

ARID1B (A-T rich interacting domain 1B), also known as BAF250B, is a DNA-binding member of the SWI/SNF complex. It has 60% homology with ARID1A/BAF250A, and the proteins are mutually exclusive members of the complex, akin to Brg1 and BRM (10). ARID1B plays a role in synapse formation and dendritic arborization in neuronal development, and haploinsufficiency of ARID1B has been reported in intellectual disability (11-13). Mutations in ARID1B have also been shown in Coffin-Siris syndrome (14). ARID1B/BAF250B is a critical vulnerability in ARID1A/BAF250A mutant cancers, and could be explored as a potential therapeutic target (15).

**Specificity/Sensitivity:** ARID1B/BAF250B (E9J4T) Rabbit mAb recognizes endogenous levels of total ARID1B/BAF250B protein. This antibody does not cross-react with ARID1A/BAF250A protein.

**Source/Purification:** Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Ala1320 of human ARID1B/BAF250B protein.




*Western blot analysis of extracts from various cell lines using ARID1B/BAF250B (E9J4T) Rabbit mAb (upper) and α-Actinin (D6F6) Rabbit mAb #6487 (lower). MIA PaCa-2 cells do not express ARID1B/BAF250B protein.*

**Storage:** Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at –20°C. *Do not aliquot the antibody.*

**Recommended Antibody Dilutions:**

| | |
|---|---|
| Western blotting | 1:1000 |
| Immunoprecipitation | 1:200 |
| Chromatin IP / Chromatin IP-seq | 1:50 |

*Optimal ChIP / ChIP-seq conditions: 10 µl of antibody & 10 µg of chromatin (4 x $10^6$ cells) per IP. Antibody validated using SimpleChIP® Enzymatic ChIP Kits.*

**For product specific protocols and a complete listing of recommended companion products please see the product web page at www.cellsignal.com.**

**Background References:**

(1) Ho, L. and Crabtree, G.R. (2010) *Nature* 463, 474-84.
(2) Becker, P.B. and Hörz, W. (2002) *Annu Rev Biochem* 71, 247-73.
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(11) Ka, M. et al. (2016) *J Neurosci* 36, 2723-42.
(12) Halgren, C. et al. (2012) *Clin Genet* 82, 248-55.
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**IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v nonfat dry milk, 1X TBS, 0.1% Tween®20 at 4°C with gentle shaking, overnight.**

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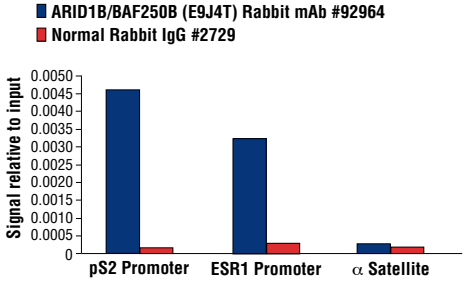
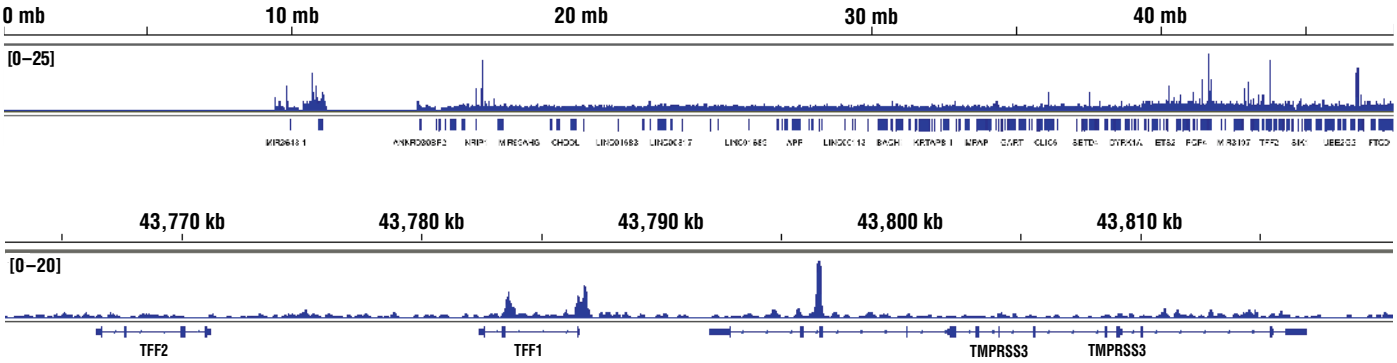
**Applications:** **W**—Western **IP**—Immunoprecipitation **IHC**—Immunohistochemistry **ChIP**—Chromatin Immunoprecipitation **IF**—Immunofluorescence **F**—Flow cytometry **E-P**—ELISA-Peptide **Species Cross-Reactivity:** **H**—human **M**—mouse **R**—rat **Hm**—hamster **Mk**—monkey **Mi**—mink **C**—chicken **Dm**—D. melanogaster **X**—Xenopus **Z**—zebrafish **B**—bovine **Dg**—dog **Pg**—pig **Sc**—S. cerevisiae **Ce**—C. elegans **Hr**—Horse **All**—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.




*Chromatin immunoprecipitations were performed with cross-linked chromatin from MCF7 cells grown in phenol red free/charcoal stripped FBS for 4 d then treated with β-estradiol (10 nM) for 45 min and either ARID1B/BAF250B (E9J4T) Rabbit mAb or Normal Rabbit IgG #2729 using SimpleChIP® Plus Enzymatic Chromatin IP Kit (Magnetic Beads) #9005. The enriched DNA was quantified by real-time PCR using SimpleChIP® Human pS2 Promoter Primers #9702, SimpleChIP® Human ESR1 Promoter Primers #9673, and SimpleChIP® Human α Satellite Repeat Primers #4486. The amount of immunoprecipitated DNA in each sample is represented as signal relative to the total amount of input chromatin, which is equivalent to one.*




*Chromatin immunoprecipitations were performed with cross-linked chromatin from MCF7 cells grown in phenol red free/charcoal stripped FBS for 4 d then treated with β-estradiol (10 nM) for 45 min and ARID1B/BAF250B (E9J4T) Rabbit mAb, using SimpleChIP® Plus Enzymatic Chromatin IP Kit (Magnetic Beads) #9005. DNA libraries were prepared using SimpleChIP® ChIP-seq DNA Library Prep Kit for Illumina® #56795. The figures show binding across chromosome 21 (upper), including TFF1/pS2 (lower), a known target gene of ARID1B (see additional figure containing ChIP-qPCR data).*