SANTA CRUZ BIOTECHNOLOGY, INC.

ATRX (D-5): sc-55584

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

ATRX is a member of the Snf2 family of helicase/ATPases, which contribute to the remodeling of the nucelosome structure in an ATP-dependent manner, and facilitate the initiation of transcription and replication. Structurally, ATRX contains a PHD zinc finger motif. ATRX is regulated throughout the cell cycle where it is differentially distributed within the nucleus. During interphase, ATRX predominately associates with the nuclear matrix, while during mitosis, ATRX localizes with condensed chromatin. At the onset of M phase, phosphorylation rapidly induces this redistribution of ATRX to the short arms of human acrocentric chromosomes, where it then specifically complexes with heterochromatin protein 1 α to mediate chromosomal segregation. Mutations in the ATRX gene correlate with a high incidence of severe X-linked form of syndromal mental retardation associated with α thalassaemia or ATR-X syndrome.

CHROMOSOMAL LOCATION

Genetic locus: ATRX (human) mapping to Xq21.1; Atrx (mouse) mapping to X D.

SOURCE

ATRX (D-5) is a mouse monoclonal antibody raised against amino acids 2193-2492 mapping near the C-terminus of ATRX of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

ATRX (D-5) is available conjugated to agarose (sc-55584 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-55584 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-55584 PE), fluorescein (sc-55584 FITC), Alexa Fluor® 488 (sc-55584 AF488), Alexa Fluor® 546 (sc-55584 AF546), Alexa Fluor® 594 (sc-55584 AF594) or Alexa Fluor® 647 (sc-55584 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-55584 AF680) or Alexa Fluor® 790 (sc-55584 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

ATRX (D-5) is recommended for detection of ATRX 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), 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 ATRX siRNA (h): sc-37704, ATRX siRNA (m): sc-37705, ATRX shRNA Plasmid (h): sc-37704-SH, ATRX shRNA Plasmid (m): sc-37705-SH, ATRX shRNA (h) Lentiviral Particles: sc-37704-V and ATRX shRNA (m) Lentiviral Particles: sc-37705-V.

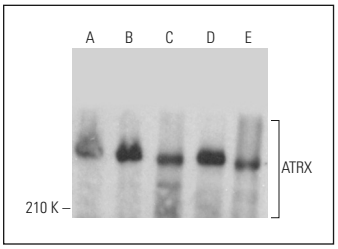
Molecular Weight of ATRX: 280 kDa.

Positive Controls: Raji whole cell lysate: sc-364236, Y79 cell lysate: sc-2240 or SH-SY5Y cell lysate: sc-3812.

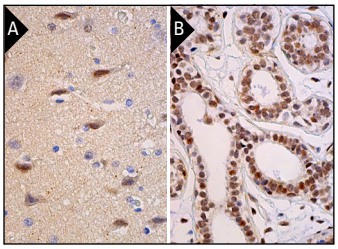
STORAGE

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

DATA



ATRX (D-5): sc-55584. Western blot analysis of ATRX expression in Raji (**A**), Y79 (**B**), SH-SY5Y (**C**) and SJRH30 (**D**) whole cell lysates and KNRK nuclear extract (**E**).



ATRX (D-5): sc-55584. Immunoperoxidase staining of formalin fixed, paraffin-embedded human cerebral cortex tissue showing nuclear staining of neuronal cells (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human breast tissue showing nuclear staining of glandular cells and myoepithelial cells (**B**).

SELECT PRODUCT CITATIONS

1. Lukashchuk, V., et al. 2008. Human cytomegalovirus protein pp71 displaces the chromatin-associated factor ATRX from nuclear domain 10 at early stages of infection. J. Virol. 82: 12543-12554.
2. McFarlane, S. and Preston, C.M. 2011. Human cytomegalovirus immediate early gene expression in the osteosarcoma line U2OS is repressed by the cell protein ATRX. Virus Res. 157: 47-53.
3. Pacurari, M., et al. 2013. The microRNA-200 family targets multiple non-small cell lung cancer prognostic markers in H1299 cells and BEAS-2B cells. Int. J. Oncol. 43: 548-560.
4. Eid, R., et al. 2015. Genetic inactivation of ATRX leads to a decrease in the amount of telomeric cohesin and level of telomere transcription in human glioma cells. Mol. Cell. Biol. 35: 2818-2830.
5. Hahn, A.S., et al. 2016. Viral FGARAT homolog ORF75 of Rhesus monkey rhadinovirus effects proteasomal degradation of the ND10 components SP100 and PML. J. Virol. 90: 8013-8028.
6. Salsman, J., et al. 2017. Myogenic differentiation triggers PML nuclear body loss and DAXX relocalization to chromocentres. Cell Death Dis. 8: e2724.
7. Juhász, S., et al. 2018. ATRX promotes DNA repair synthesis and sister chromatid exchange during homologous recombination. Mol. Cell 71: 11-24.e7.
8. Michaud, K., et al. 2018. Impact of 9p deletion and p16, cyclin D1, and Myc hyperexpression on the outcome of anaplastic oligodendrogliomas. PLoS ONE 13: e0193213.

RESEARCH USE

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