# ATRX (H-300): sc-15408



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  $\alpha$  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  $\alpha$  thalassaemia or ATRX syndrome.

# **CHROMOSOMAL LOCATION**

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

#### **SOURCE**

ATRX (H-300) is a rabbit polyclonal antibody raised against amino acids 2193-2492 mapping near the C-terminus of ATRX of human origin.

# **PRODUCT**

Each vial contains 200  $\mu g$  lgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

#### **APPLICATIONS**

ATRX (H-300) is recommended for detection of ATRX of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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).

ATRX (H-300) is also recommended for detection of ATRX in additional species, including canine, bovine, porcine and avian.

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: HeLa nuclear extract: sc-2120, HeLa whole cell lysate: sc-2200 or 3T3-L1 cell lysate: sc-2243.

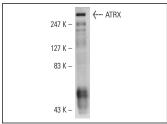
### **STORAGE**

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

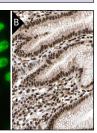
#### **RESEARCH USE**

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

#### DATA







ATRX (H-300): sc-15408. Western blot analysis of ATRX expression in HeLa nuclear extract.

ATRX (H-300): sc-15408. Immunofluorescence staining of formalin-fixed HeLa cells showing nuclear localization. Kindly provided by Yang Xiang, Ph.D., Division of Newborn Medicine, Boston Children's Hospital, Cell Biology Department, Harvard Medical School (A). Immunoperoxidase staining of formalin fixed, paraffinembedded human stomach tissue showing nuclear staining of glandular cells. Kindly provided by The Swedish Human Protein Atlas (HPA) program (B).

#### **SELECT PRODUCT CITATIONS**

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- Ishov, A.M., et al. 2004. Heterochromatin and ND10 are cell-cycle regulated and phosphorylation-dependent alternate nuclear sites of the transcription repressor Daxx and SWI/SNF protein ATRX. J. Cell Sci. 117: 3807-3820.
- Garrick, D., et al. 2004. A conserved truncated isoform of the ATR-X syndrome protein lacking the SWI/SNF-homology domain. Gene 326: 23-34.
- 4. Zydek, M., et al. 2011. General blockade of human cytomegalovirus immediate-early mRNA expression in the  $S/G_2$  phase by a nuclear, Daxx- and PML-independent mechanism. J. Gen. Virol. 92: 2757-2769.
- Bagheri-Fam, S., et al. 2011. Defective survival of proliferating Sertoli cells and androgen receptor function in a mouse model of the ATR-X syndrome. Hum. Mol. Genet. 20: 2213-2224.
- Shioda, N., et al. 2011. Aberrant calcium/calmodulin-dependent protein kinase II (CaMKII) activity is associated with abnormal dendritic spine morphology in the ATRX mutant mouse brain. J. Neurosci. 31: 346-358.
- 7. Nogami, T., et al. 2011. Reduced expression of the ATRX gene, a chromatin-remodeling factor, causes hippocampal dysfunction in mice. Hippocampus 21: 678-687.



Try **ATRX (D-5):** sc-55584, our highly recommended monoclonal aternatives to ATRX (H-300). Also, for AC, HRP, FITC, PE, Alexa Fluor<sup>®</sup> 488 and Alexa Fluor<sup>®</sup> 647 conjugates, see **ATRX (D-5):** sc-55584.