Anti-ATRX Antibody [2-E7]

M1311-2

Product Type:	Mouse monoclonal IgG1, primary antibodies
Species reactivity:	Human, Mouse
Applications:	WB, IF-Cell, IHC-P
Molecular Wt:	Predicted band size: 283 kDa
Clone number:	2-E7

Description: Transcriptional regulator ATRX contains an ATPase / helicase domain, and thus it belongs to the SWI/SNF family of chromatin remodeling proteins. This protein is found to undergo cell cycle-dependent phosphorylation, which regulates its nuclear matrix and chromatin association, and suggests its involvement in the gene regulation at interphase and chromosomal segregation in mitosis. Mutations of the ATRX gene are associated with an X-linked mental retardation (XLMR) syndrome most often accompanied by alpha-thalassemia (ATRX) syndrome. These mutations have been shown to cause diverse changes in the pattern of DNA methylation, which may provide a link between chromatin remodeling, DNA methylation, and gene expression in developmental processes.

Immunogen: Recombinant protein within mouse ATRX aa 2,236-2,416 / 2,476.

Positive control: SH-SY5Y cell lysate, NIH/3T3, mouse kidney tissue.

Subcellular location: Nucleus, Chromosome, telomere, PML body.

Database links: SwissProt: P46100 Human | Q61687 Mouse

Recommended Dilutions:

WB	1:1,000
IF-Cell	1:100
IHC-P	1:200-1:1,000

Storage Buffer: 1*PBS (pH7.4), 0.2% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.

Storage Instruction: Shipped at 4℃. Store at +4℃ short term (1-2 weeks). It is recommended to aliquot into single-use upon delivery. Store at -20℃ long term.

Purity: Protein G affinity purified.

Images

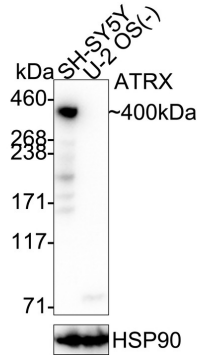

Fig1: Western blot analysis of ATRX on different lysates with Mouse anti-ATRX antibody (M1311-2) at 1/1,000 dilution.

Lane 1: SH-SY5Y cell lysate
Lane 2: U-2 OS cell lysate (negative)

Lysates/proteins at 30 µg/Lane.

Predicted band size: 283 kDa
Observed band size: 400 kDa

Exposure time: 10 seconds; ECL: K1801;

4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (M1311-2) at 1/1,000 dilution was used in 5% NFDM/TBST at 4℃ overnight. Goat Anti-Mouse IgG - HRP Secondary Antibody (HA1006) at 1/50,000 dilution was used for 1 hour at room temperature.

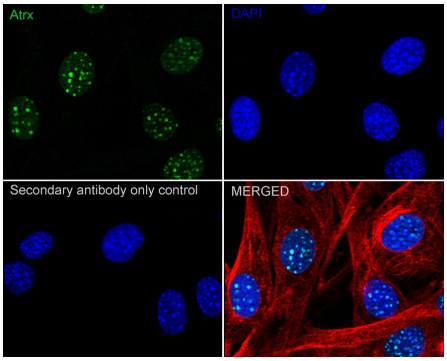

Fig2: Immunocytochemistry analysis of NIH/3T3 cells labeling ATRX with Mouse anti-ATRX antibody (M1311-2) at 1/100 dilution.

Cells were fixed in 4% paraformaldehyde for 15 minutes at room temperature, permeabilized with 0.1% Triton X-100 in PBS for 15 minutes at room temperature, then blocked with 1% BSA in 10% negative goat serum for 1 hour at room temperature. Cells were then incubated with Mouse anti-ATRX antibody (M1311-2) at 1/100 dilution in 1% BSA in PBST overnight at 4 ℃. Goat Anti-Mouse IgG H&L (iFluor™ 488, HA1125) was used as the secondary antibody at 1/1,000 dilution. PBS instead of the primary antibody was used as the secondary antibody only control. Nuclear DNA was labelled in blue with DAPI.

beta Tubulin (ET1602-4, red) was stained at 1/100 dilution overnight at +4℃. Goat Anti-Rabbit IgG H&L (iFluor™ 594, HA1122) were used as the secondary antibody at 1/1,000 dilution.

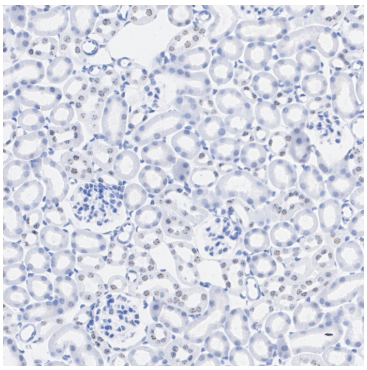

Fig3: Immunohistochemical analysis of paraffin-embedded mouse kidney tissue with Mouse anti-ATRX antibody (M1311-2) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (M1311-2) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

Background References

1. Yuan K et al. Mutant ATRX: pathogenesis of ATRX syndrome and cancer. Front Mol Biosci. 2024 Oct
2. Aguilera P et al. ATRX, a guardian of chromatin. Trends Genet. 2023 Jun