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| Clone | D5 |
| Source | Mouse Monoclonal |
| Cat #  | PM229-6ml RTUPM229-3ml RTUCM229-0.1ml ConcCM229-0.5ml Conc HAM229-3ml RTUHam229-6ml RTU |
| Regulatory Status | IVD |

**ATRX- (D5)**

**Intended Use:**

This antibody is intended for use to qualitatively identify ATRX antigen by light microscopy in formalin fixed, paraffin embedded tissue sections using immunohistochemical detection methodology. Interpretation of any positive or negative staining must be complemented with the evaluation of proper controls and must be made within the context of the patient’s clinical history and other diagnostic tests. A qualified pathologist must perform evaluation of the test.

**Summary and Explanation:**

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, phospho- rylation rapidly induces this redistribution of ATRX to the short arms of human acrocentric chromosomes, where it then specifically complexes with hete- rochromatin 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 ATRX syndrome.

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

 **Isotype:** Mouse IgG2a

**Reagent Provided:
 Concentrated format:** Antibody to ATRX is diluted in antibody diluent, with 1% bovine serum
 albumin (BSA) and 0.05% sodium azide (NaN3). Recommended dilutions: 1:50 –
 1:100.The antibody dilution and protocol may vary depending on the specimen
 preparation and specific application. Optimal conditions should be
 determined by individual laboratory.

 **Pre-diluted format:** PathnSitu ready to use antibodies are pre tittered to optimal staining
 conditions. Further dilution may loose the activity and may yield to sub
 optimal staining.

**Storage Recommendations:** Store at 2°-8°C. Do not use after expiration date provided on the vial.

**Staining Recommendations:
 Antigen Retrieval Solution:** Use **Tris EDTA Buffer** **(PathnSitu Cat # PS009)** as antigen retrieval
 solution Heat Retrieval Method: Retrieve sections under steam pressure
 for 15 min using PathnSitu’s MERS (Multi Epitope Retrieval System) then
 allow solution to cool for 10 minutes then transfer tissue sections/slides to
 distilled water.

**Primary Antibody:**  Cover the tissue sections with primary antibody and incubate for 30
 min at room temperature when used PathnSitu PolyExcel Detection
 System.

**Detection System:** Refer to PathnSitu PolyExcel detection system protocol or manufacturer’s detection kit staining protocol when used other vendor detection system.

**Cellular Localization:** Nuclear

**Positive Control:** Astrocytoma, Glioma

**Troubleshooting:** Follow the antibody specific protocol recommendations according to data sheet provided. If unusual results occur, contact PathnSitu Technical Support at 040-2701 5544 or techsupport@pathnsitu.com.

**Limitations and Warranty:** There are no warranties, expressed or implied, which extend beyond this
 description. PathnSitu is not liable for property damage, personal injury, or
 economic loss caused by this product.

**Bibliography:**  1. 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.

1. Levy, M.A., et al. 2015. ATRX promotes gene expression by facilitating transcriptional elongation through guanine-rich coding regions. Hum. Mol. Genet. 24: 1824-1835.
2. 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.