


## Product datasheet

### Anti-ATRX antibody ab84462

2 Images

#### Overview

<b>Product name</b>	Anti-ATRX antibody
<b>Description</b>	Rabbit polyclonal to ATRX
<b>Host species</b>	Rabbit
<b>Tested applications</b>	<b>Suitable for:</b> IHC-P
<b>Species reactivity</b>	<b>Reacts with:</b> Human <b>Predicted to work with:</b> Rabbit, Pig, Chimpanzee, Rhesus monkey, Gorilla, Orangutan, Tammar wallaby 
<b>Immunogen</b>	Synthetic peptide corresponding to Human ATRX aa 2442-2492 (C terminal). Database link: <a href="#">P46100</a>
<b>Positive control</b>	human Breast Carcinoma, Linitis Plastica Stomach Cancer, Ovarian Carcinoma, Prostate Carcinoma, Skin Basal Cell Carcinoma, Stomach Adenocarcinoma tissue.
<b>General notes</b>	Concentration is optimized for IHC and not determined  The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.  If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As

#### Properties

<b>Form</b>	Liquid
<b>Storage instructions</b>	Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles.
<b>Storage buffer</b>	pH: 6.8 Preservative: 0.09% Sodium azide Constituents: 0.1% BSA, Tris buffered saline
<b>Purity</b>	Immunogen affinity purified
<b>Purification notes</b>	Antibody was affinity purified using an epitope specific to ATRX immobilized on solid support.
<b>Clonality</b>	Polyclonal

Isotype

IgG

## Applications

### The Abpromise guarantee

Our **Abpromise guarantee** covers the use of ab84462 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
IHC-P		1/100 - 1/500. Antigen retrieval is not essential but may optimise staining.

## Target

### Function

Involved in transcriptional regulation and chromatin remodeling. Facilitates DNA replication in multiple cellular environments and is required for efficient replication of a subset of genomic loci. Binds to DNA tandem repeat sequences in both telomeres and euchromatin and in vitro binds DNA quadruplex structures. May help stabilizing G-rich regions into regular chromatin structures by remodeling G4 DNA and incorporating H3.3-containing nucleosomes. Catalytic component of the chromatin remodeling complex ATRX:DAXX which has ATP-dependent DNA translocase activity and catalyzes the replication-independent deposition of histone H3.3 in pericentric DNA repeats outside S-phase and telomeres, and the in vitro remodeling of H3.3-containing nucleosomes. Its heterochromatin targeting is proposed to involve a combinatorial readout of histone H3 modifications (specifically methylation states of H3K9 and H3K4) and association with CBX5. Involved in maintaining telomere structural integrity in embryonic stem cells which probably implies recruitment of CBX5 to telomers. Reports on the involvement in transcriptional regulation of telomeric repeat-containing RNA (TERRA) are conflicting; according to a report, it is not sufficient to decrease chromatin condensation at telomers nor to increase expression of telomeric RNA in fibroblasts (PubMed:24500201). May be involved in telomere maintenance via recombination in ALT (alternative lengthening of telomeres) cell lines. Acts as negative regulator of chromatin incorporation of transcriptionally repressive histone H2AFY, particularly at telomeres and the alpha-globin cluster in erythroleukemic cells. Participates in the allele-specific gene expression at the imprinted IGF2/H19 gene locus. On the maternal allele, required for the chromatin occupancy of SMC1 and CTCF within the H19 imprinting control region (ICR) and involved in establishment of histone tails modifications in the ICR. May be involved in brain development and facial morphogenesis. Binds to zinc-finger coding genes with atypical chromatin signatures and regulates its H3K9me3 levels. Forms a complex with ZNF274, TRIM28 and SETDB1 to facilitate the deposition and maintenance of H3K9me3 at the 3' exons of zinc-finger genes (PubMed:27029610).

### Tissue specificity

Ubiquitous.

### Involvement in disease

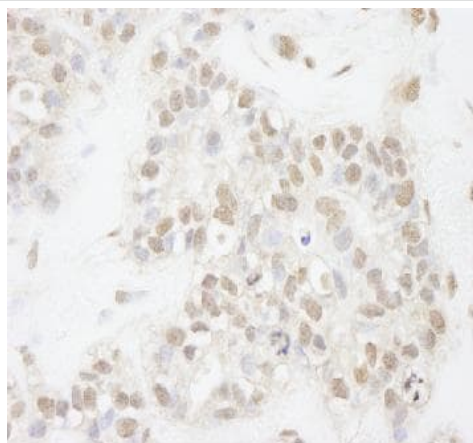
Alpha-thalassemia mental retardation syndrome, X-linked  
Mental retardation, X-linked, syndromic, with hypotonic facies 1  
Alpha-thalassemia myelodysplasia syndrome

### Sequence similarities

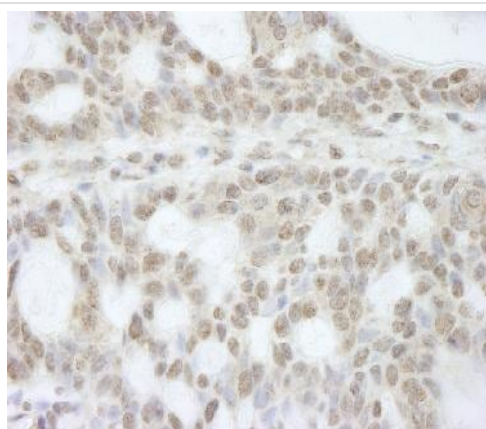
Belongs to the SNF2/RAD54 helicase family.  
Contains 1 ADD domain.  
Contains 1 GATA-type zinc finger.  
Contains 1 helicase ATP-binding domain.  
Contains 1 helicase C-terminal domain.

	Contains 1 PHD-type zinc finger.
<b>Domain</b>	<p>The ADD domain predominantly interacts with histone H3 trimethylated at 'Lys-10'(H3K9me3) (and to a lesser extent H3 mono-or dimethylated at 'Lys-10') and simultaneously to histone H3 unmethylated at 'Lys-5' (H3K4me0). The interaction with H3K9me3 is disrupted by the presence of H3K4me3 suggesting a readout of the combined histone H3 methylation state.</p> <p>Contains one Pro-Xaa-Val-Xaa-Leu (PxVxL) motif, which is required for interaction with chromoshadow domains. This motif requires additional residues -7, -6, +4 and +5 of the central Val which contact the chromoshadow domain.</p>
<b>Post-translational modifications</b>	Phosphorylated at serine residues during mitose. Phosphorylation may promote the release from the nuclear matrix and progression to mitosis.
<b>Cellular localization</b>	<p>Nucleus. Chromosome, telomere. Nucleus, PML body. Associated with pericentromeric heterochromatin during interphase and mitosis, probably by interacting with CBX5/HP1 alpha.</p> <p>Colocalizes with histone H3.3, DAXX, HIRA and ASF1A at PML-nuclear bodies. Colocalizes with cohesin (SMC1 and SMC3) and MECP2 at the maternal H19 ICR (By similarity).</p>

## Images



ab84462, at 1/250 dilution, staining ATRX in formalin-fixed, paraffin-embedded human breast carcinoma by Immunohistochemistry, using DAB detection.



ab84462, at 1/250 dilution, staining ATRX in formalin-fixed, paraffin-embedded human basal cell carcinoma by Immunohistochemistry, using DAB detection.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-ATRX antibody (ab84462)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-ATRX antibody (ab84462)

**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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