

## Product datasheet

# Anti-ATRX antibody [ATRX/2900R] - BSA and Azide free ab270303

Recombinant

[2 Images](#)

### Overview

---

<b>Product name</b>	Anti-ATRX antibody [ATRX/2900R] - BSA and Azide free
<b>Description</b>	Rabbit monoclonal [ATRX/2900R] to ATRX - BSA and Azide free
<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>Immunogen</b>	Recombinant fragment within Human ATRX. The exact sequence is proprietary. Database link: <a href="#">P46100</a>
<b>Positive control</b>	IHC-P: Human prostate tissue.
<b>General notes</b>	ab270303 is a carrier free version of <a href="#">ab270272</a> .  Our <b>carrier-free</b> antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. The carrier-free buffer and high concentration allow for increased conjugation efficiency.  This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.  Use our <b>conjugation kits</b> for antibody conjugates that are ready-to-use in as little as 20 minutes with <1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.

### Properties

---

<b>Form</b>	Liquid
<b>Storage instructions</b>	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C. Avoid freeze / thaw cycle.
<b>Storage buffer</b>	pH: 7.2 Constituent: PBS
<b>Carrier free</b>	Yes
<b>Purity</b>	Protein A/G purified

<b>Purification notes</b>	Purified from bioreactor concentrate.
<b>Clonality</b>	Monoclonal
<b>Clone number</b>	ATRX/2900R
<b>Isotype</b>	IgG

## Applications

**The Abpromise guarantee** Our **Abpromise guarantee** covers the use of ab270303 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		Use a concentration of 1 - 2 µg/ml. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

## 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.

### Domain

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.  
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.

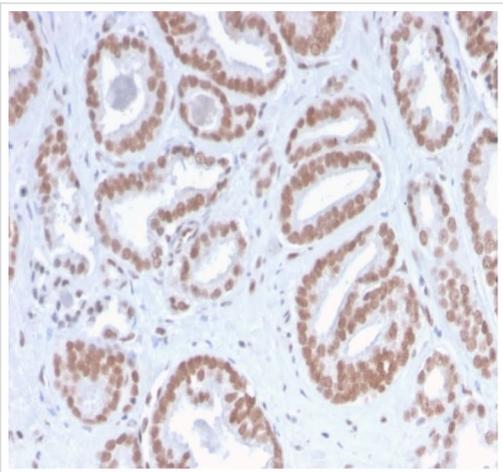
### Post-translational modifications

Phosphorylated at serine residues during mitose. Phosphorylation may promote the release from the nuclear matrix and progression to mitosis.

### Cellular localization

Nucleus. Chromosome, telomere. Nucleus, PML body. Associated with pericentromeric heterochromatin during interphase and mitosis, probably by interacting with CBX5/HP1 alpha. 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).

### Images



Formalin-fixed, paraffin-embedded human prostate carcinoma tissue stained for ATRX using [ab270272](#) at 2µg/ml in immunohistochemical analysis.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, and sodium azide ([ab270272](#)).

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-ATRX antibody [ATRX/2900R] - BSA and Azide free ([ab270303](#))

### Why choose a recombinant antibody?



**Research with confidence**  
Consistent and reproducible results



**Long-term and scalable supply**  
Recombinant technology



**Success from the first experiment**  
Confirmed specificity



**Ethical standards compliant**  
Animal-free production

Anti-ATRX antibody [ATRX/2900R] - BSA and Azide free (ab270303)

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

### Our Abpromise to you: Quality guaranteed and expert technical support

---

- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery
- Response to your inquiry within 24 hours
- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit <https://www.abcam.com/abpromise> or contact our technical team.

### Terms and conditions

---

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors