

Anti-ATR (phospho S428) antibody [EPR2184] - BSA and Azide free ab230831

Recombinant RabMAb

[1 References](#) [4 Images](#)

Overview

Product name	Anti-ATR (phospho S428) antibody [EPR2184] - BSA and Azide free
Description	Rabbit monoclonal [EPR2184] to ATR (phospho S428) - BSA and Azide free
Host species	Rabbit
Specificity	<i>Stimulation may be required to allow detection of the phosphorylated protein. Please see images below for recommended treatment conditions and positive controls.</i>
Tested applications	Suitable for: WB, IHC-P, Dot blot Unsuitable for: Flow Cyt, ICC/IF or IP
Species reactivity	Reacts with: Human Does not react with: Mouse, Rat
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
Positive control	HeLa cell lysate treated with Okadaic Acid + Calyculin A, HEK-293 cell lysate; Human prostate and Human testis tissues.
General notes	<p>ab230831 is the carrier-free version of ab178407.</p> <p>Our carrier-free 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.</p> <p>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.</p> <p>Use our conjugation kits 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.</p> <p>This product is compatible with the Maxpar[®] Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar[®] is a trademark of Fluidigm Canada Inc.</p>

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C. Do Not Freeze.
Storage buffer	pH: 7.20 Constituent: 100% PBS
Carrier free	Yes
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR2184
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab230831 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
WB		Use at an assay dependent concentration. Predicted molecular weight: 300 kDa.
IHC-P		Use at an assay dependent concentration. Perform heat mediated antigen retrieval before commencing with IHC staining protocol.
Dot blot		Use at an assay dependent concentration.

Application notes Is unsuitable for Flow Cyt, ICC/IF or IP.

Target

Function	Serine/threonine protein kinase which activates checkpoint signaling upon genotoxic stresses such as ionizing radiation (IR), ultraviolet light (UV), or DNA replication stalling, thereby acting as a DNA damage sensor. Recognizes the substrate consensus sequence [ST]-Q. Phosphorylates BRCA1, CHEK1, MCM2, RAD17, RPA2, SMC1 and p53/TP53, which collectively inhibit DNA replication and mitosis and promote DNA repair, recombination and apoptosis. Phosphorylates 'Ser-139' of histone variant H2AX/H2AFX at sites of DNA damage, thereby regulating DNA damage response mechanism. Required for FANCD2 ubiquitination. Critical for maintenance of fragile site stability and efficient regulation of centrosome duplication.
Tissue specificity	Ubiquitous, with highest expression in testis. Isoform 2 is found in pancreas, placenta and liver but not in heart, testis and ovary.
Involvement in disease	Defects in ATR are a cause of Seckel syndrome type 1 (SCKL1) [MIM:210600]. SCKL1 is a rare autosomal recessive disorder characterized by growth retardation, microcephaly with mental retardation, and a characteristic 'bird-headed' facial appearance.
Sequence similarities	Belongs to the PI3/PI4-kinase family. ATM subfamily. Contains 1 FAT domain. Contains 1 FATC domain. Contains 2 HEAT repeats.

Contains 1 PI3K/PI4K domain.

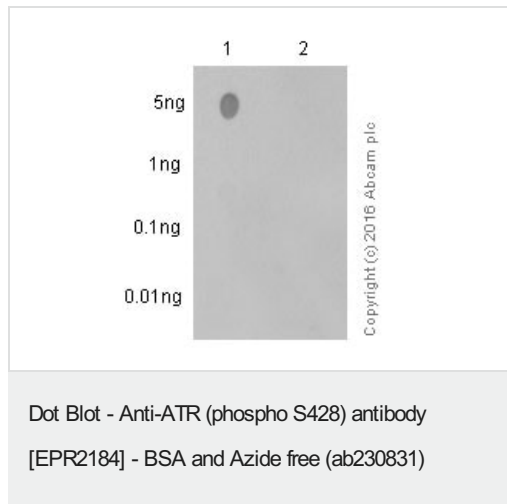
Post-translational modifications

Phosphorylated; autophosphorylates in vitro.

Cellular localization

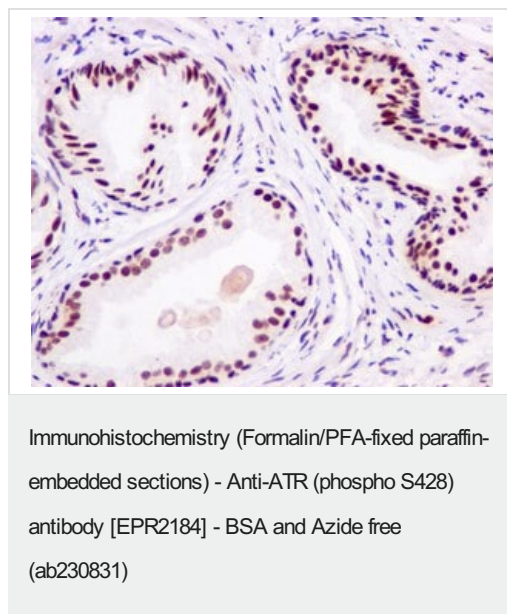
Nucleus. Nucleus > PML body. Depending on the cell type, it can also be found in PML nuclear bodies. Recruited to chromatin during S-phase. Redistributes to discrete nuclear foci upon DNA damage, hypoxia or replication fork stalling.

Images



Dot Blot analysis of Lane 1: ATR (pS428) phospho peptide and Lane 2: ATR non-phospho peptide labeling ATR (phospho S428) with [ab178407](#) at 1/1000 dilution. 5% NFDM/TBST was used as the diluting and blocking buffer. [ab97051](#) Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated was used as the secondary antibody at 1/100000 dilution. Exposure time: 10 seconds.

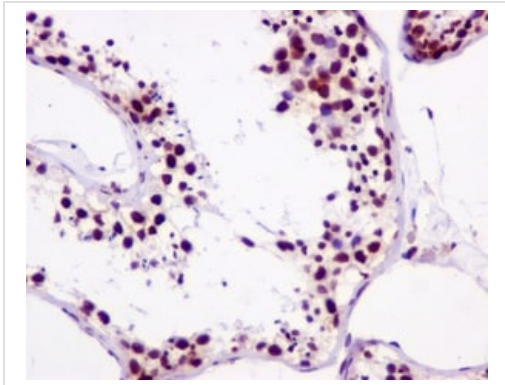
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide ([ab178407](#)).



This IHC data was generated using the same phospho anti-ATR antibody clone, EPR2184, in a different buffer formulation (cat# [ab178407](#)).

Immunohistochemical analysis of paraffin embedded Human prostate tissue labeling ATR (phospho S428) with [ab178407](#) at 1/50.

Heat mediated antigen retrieval was performed before commencing with IHC staining protocol.



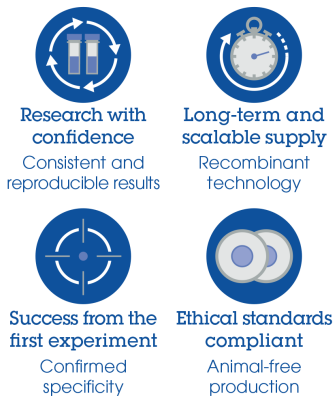
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-ATR (phospho S428) antibody [EPR2184] - BSA and Azide free (ab230831)

This IHC data was generated using the same phospho anti-ATR antibody clone, EPR2184, in a different buffer formulation (cat# **ab178407**).

Immunohistochemical analysis of paraffin embedded Human testis tissue labeling ATR (phospho S428) with **ab178407** at 1/50.

Heat mediated antigen retrieval was performed before commencing with IHC staining protocol.

Why choose a recombinant antibody?



Anti-ATR (phospho S428) antibody [EPR2184] - BSA and Azide free (ab230831)

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

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