

# Anti-ATR (phospho T1989) antibody [EPR21991] - BSA and Azide free ab237563

Recombinant RabMAb

3 Images

### Overview

<b>Product name</b>	Anti-ATR (phospho T1989) antibody [EPR21991] - BSA and Azide free
<b>Description</b>	Rabbit monoclonal [EPR21991] to ATR (phospho T1989) - BSA and Azide free
<b>Host species</b>	Rabbit
<b>Tested applications</b>	<b>Suitable for:</b> WB, Dot blot
<b>Species reactivity</b>	<b>Reacts with:</b> Human
<b>Immunogen</b>	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
<b>Positive control</b>	WB: Untreated HeLa whole cell lysate; HeLa cell lysate treated with 4mM hydroxyurea for 20 hour.
<b>General notes</b>	ab237563 is the carrier-free version of <a href="#">ab223258</a> .

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.

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 **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.

This product is compatible with the Maxpar<sup>®</sup> Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar<sup>®</sup> is a trademark of Fluidigm Canada Inc.

This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free production

For more information [see here](#).

Our RabMAb<sup>®</sup> technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to [RabMAb<sup>®</sup> patents](#).

## Properties

<b>Form</b>	Liquid
<b>Storage instructions</b>	Shipped at 4°C. Store at +4°C. Do Not Freeze.
<b>Storage buffer</b>	pH: 7.2 Constituent: PBS
<b>Carrier free</b>	Yes
<b>Purity</b>	Protein A purified
<b>Clonality</b>	Monoclonal
<b>Clone number</b>	EPR21991
<b>Isotype</b>	IgG

## Applications

**The Abpromise guarantee** Our **Abpromise guarantee** covers the use of ab237563 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
<b>WB</b>		Use at an assay dependent concentration. Detects a band of approximately 301 kDa (predicted molecular weight: 301 kDa).
<b>Dot blot</b>		Use at an assay dependent concentration.

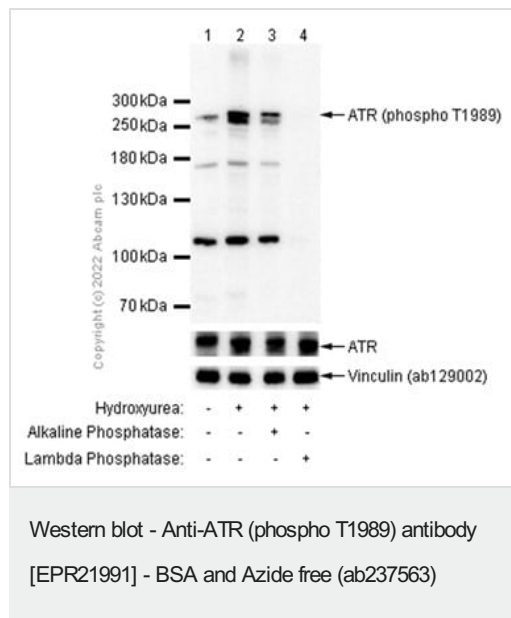
## Target

<b>Function</b>	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.
<b>Tissue specificity</b>	Ubiquitous, with highest expression in testis. Isoform 2 is found in pancreas, placenta and liver but not in heart, testis and ovary.
<b>Involvement in disease</b>	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.
<b>Sequence similarities</b>	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.
<b>Post-translational modifications</b>	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



**All lanes :** Anti-ATR (phospho T1989) antibody [EPR21991] ([ab223258](#)) at 1/1000 dilution

**Lane 1 :** Untreated HeLa (Human cervix adenocarcinoma epithelial cell) whole cell lysate

**Lane 2 :** HeLa treated with 4mM hydroxyurea for 20 hours whole cell lysate

**Lane 3 :** HeLa treated with 4mM hydroxyurea for 20 hours whole cell lysate, then the membrane treated with Alkaline Phosphatase for 1 hour

**Lane 4 :** HeLa treated with 4mM hydroxyurea for 20 hours whole cell lysate, then the membrane treated with Lambda Phosphatase for 1 hour

Lysates/proteins at 15 µg per lane.

### Secondary

**All lanes :** Goat Anti-Rabbit IgG H&L (HRP) ([ab97051](#)) at 1/20000 dilution

**Predicted band size:** 301 kDa

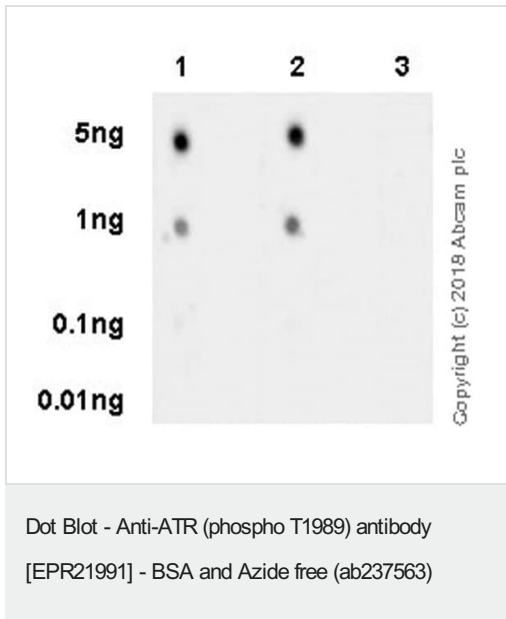
**Observed band size:** 270 kDa

**Exposure time:** 100 seconds

**Blocking and dilution buffer:** 5% NFDm/TBST.

We are unsure of the nature of the 110kDa band.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide ([ab223258](#)).



Dot blot analysis of ATR (phospho T1989) labeled with **ab223258** at 1/1000 dilution.

**Lane 1:** ATR (phospho T1989) peptide (aa1983-1992).

**Lane 2:** ATR (phospho T1989) peptide (aa1986-1995).

**Lane 3:** ATR non-phospho peptide.

Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/100000 dilution was used as secondary antibody.

Blocking/Dilution buffer: 5% NFDm/TBST.

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 (**ab223258**).

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-ATR (phospho T1989) antibody [EPR21991] - BSA and Azide free (ab237563)

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

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