

Product datasheet

Anti-ATR (phospho T1989) antibody [EPR21991] ab223258

Recombinant RabMAb

★★★★★ 1 Abreviews 3 Images

Overview

Product name	Anti-ATR (phospho T1989) antibody [EPR21991]
Description	Rabbit monoclonal [EPR21991] to ATR (phospho T1989)
Host species	Rabbit
Tested applications	Suitable for: WB, Dot blot
Species reactivity	Reacts with: Human
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
Positive control	WB: Untreated HeLa whole cell lysate; HeLa cell lysate treated with 4mM hydroxyurea for 20 hour.
General notes	<p>This product is a recombinant monoclonal antibody, which offers several advantages including:</p> <ul style="list-style-type: none"> - High batch-to-batch consistency and reproducibility - Improved sensitivity and specificity - Long-term security of supply - Animal-free production <p>For more information see here.</p> <p>Our RabMAb[®] technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb[®] patents.</p>

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.
Storage buffer	<p>pH: 7.2</p> <p>Preservative: 0.01% Sodium azide</p> <p>Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA</p>
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR21991
Isotype	IgG

Applications

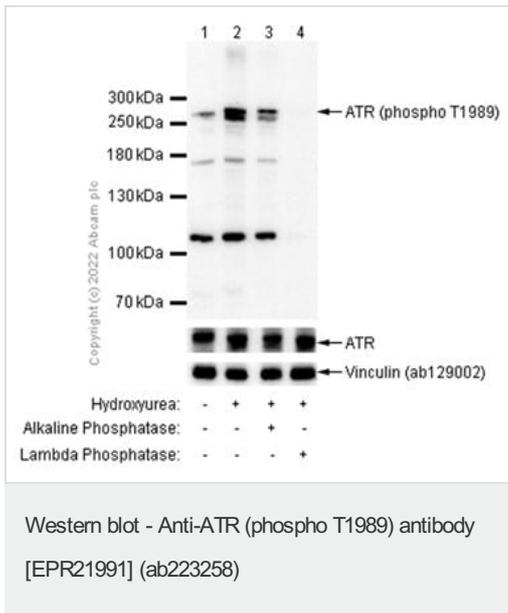
The Abpromise guarantee Our [Abpromise guarantee](#) covers the use of ab223258 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB	★★★★★ (1)	1/1000. Detects a band of approximately 301 kDa (predicted molecular weight: 301 kDa).
Dot blot		1/1000.

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



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

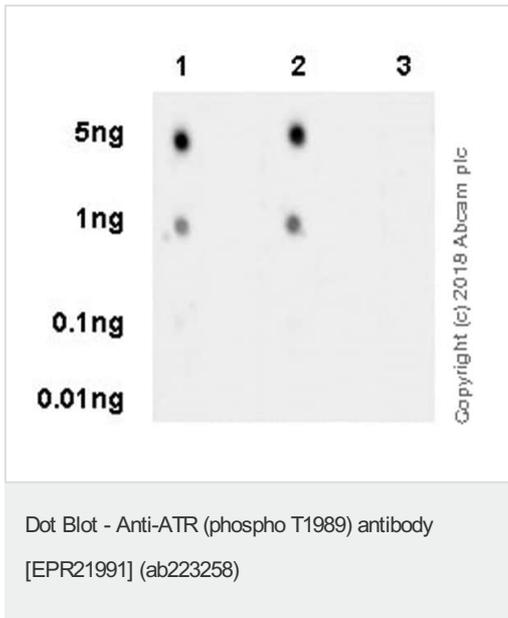
Predicted band size: 301 kDa

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.



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.

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] (ab223258)

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

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