

## Product datasheet

# Anti-ATR antibody - ChIP Grade ab2905

★★★★☆ 23 Abreviews 22 References 3 Images

### Overview

<b>Product name</b>	Anti-ATR antibody - ChIP Grade
<b>Description</b>	Rabbit polyclonal to ATR - ChIP Grade
<b>Host species</b>	Rabbit
<b>Tested applications</b>	<b>Suitable for:</b> ICC/IF, IP, WB, ChIP
<b>Species reactivity</b>	<b>Reacts with:</b> Mouse, Human
<b>Immunogen</b>	Fusion protein, corresponding to amino acids 400-460 of Human ATR.
<b>Positive control</b>	UV irradiated K562 cells.

### 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 or -80°C. Avoid freeze / thaw cycle.
<b>Storage buffer</b>	Preservative: 0.05% Sodium azide Constituent: 99% PBS
<b>Purity</b>	Immunogen affinity purified
<b>Clonality</b>	Polyclonal
<b>Isotype</b>	IgG

### Applications

Our [Abpromise guarantee](#) covers the use of **ab2905** in the following tested applications.

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

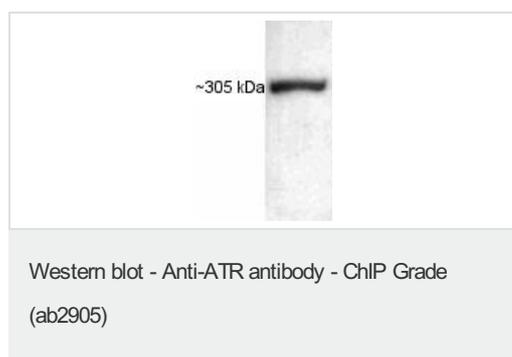
Application	Abreviews	Notes
ICC/IF	★★★★★	Use at an assay dependent dilution.
IP	★★★★☆	Use a concentration of 2 mg/ml.

Application	Abreviews	Notes
WB	★★★★☆	1/1000. Detects a band of approximately 305 kDa (predicted molecular weight: 309 kDa). (in lysate from UV irradiated K562 cells).
ChIP		Use at an assay dependent dilution. PubMed: 20647539

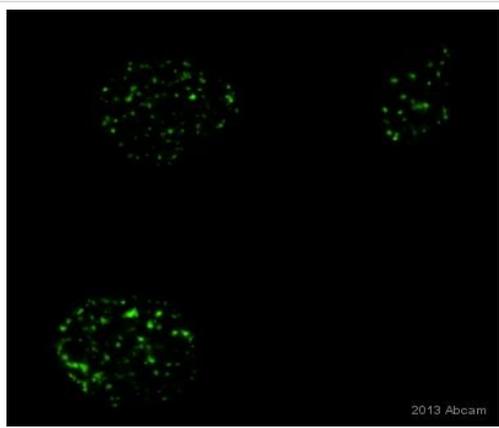
## Target

<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.
<b>Cellular localization</b>	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



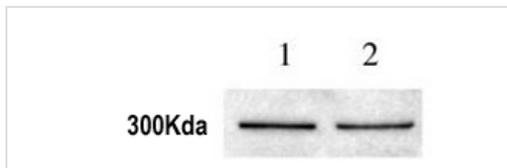
Western blot on ATR in K562 whole cell lysate using ab2905.



Immunocytochemistry/ Immunofluorescence - Anti-ATR antibody - ChIP Grade (ab2905)

This image is courtesy of an anonymous Abreview

ab2905 staining ATR in the U2OS cell line from Human Osteosarcoma by ICC/IF (Immunocytochemistry/immunofluorescence). Cells were fixed with Formaldehyde, permeabilized with NP-40 and blocked with 3% BSA for 60 minutes at 21°C. Samples were incubated with primary antibody (1/500 in PBS + 3% BSA) for 12 hour at 4°C. An Alexa Fluor®488-conjugated Donkey anti-rabbit IgG polyclonal(1/500) was used as the secondary antibody.



Western blot - Anti-ATR antibody - ChIP Grade (ab2905)

**All lanes** : Anti-ATR antibody - ChIP Grade (ab2905) at 1/1000 dilution

**Lane 1** : MCF10A breast epithelial cells, grown in normoxic conditions (20% O<sub>2</sub>). Cells were lysed with NP40.

**Lane 2** : MCF10A Breast Epithelial cells grown in hypoxic conditions (5% O<sub>2</sub>). Cells were lysed with NP40.

Lysates/proteins at 10 µg per lane.

### Secondary

**All lanes** : Goat anti Rabbit (HRP) at 1/10000 dilution

Developed using the ECL technique.

Performed under reducing conditions.

**Predicted band size:** 309 kDa

**Observed band size:** 300 kDa

[why is the actual band size different from the predicted?](#)

**Exposure time:** 30 seconds

**Blocking:** Carried out using non fat dry milk for 1 hr at room temperature.

This image is an edited version of an image submitted courtesy of an Abreview by **Francisco Ramirez-Valle** submitted on **15th November 2005**. We do not have any further information relating to this image.

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