


### Anti-Rad9 antibody ab70810

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#### Overview

<b>Product name</b>	Anti-Rad9 antibody
<b>Description</b>	Rabbit polyclonal to Rad9
<b>Host species</b>	Rabbit
<b>Tested applications</b>	<b>Suitable for:</b> IHC-P, WB, IP
<b>Species reactivity</b>	<b>Reacts with:</b> Human <b>Predicted to work with:</b> Cow, Dog, Pig, Ferret, Rhesus monkey, Gorilla, Bat 
<b>Immunogen</b>	Synthetic peptide corresponding to a region between residue 350 and the C-terminus (residue 391) of Human Rad9 (NP_004575.1)
<b>Positive control</b>	Whole cell lysate from HeLa and 293T cells.
<b>General notes</b>	<p>The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.</p> <p>If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&amp;As</p>

#### 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 Preservative: 0.09% Sodium azide Constituents: 1.815% Tris, 1.764% Sodium citrate, 0.021% PBS
<b>Purity</b>	Immunogen affinity purified
<b>Clonality</b>	Polyclonal
<b>Isotype</b>	IgG

#### Applications

## The Abpromise guarantee

Our **Abpromise guarantee** covers the use of ab70810 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 5 µg/ml. Perform heat mediated antigen retrieval before commencing with IHC staining protocol.
WB		1/2000 - 1/10000. Detects a band of approximately 55 kDa (predicted molecular weight: 43 kDa).
IP		Use at 2-5 µg/mg of lysate.

## Target

### Function

Component of the 9-1-1 cell-cycle checkpoint response complex that plays a major role in DNA repair. The 9-1-1 complex is recruited to DNA lesion upon damage by the RAD17-replication factor C (RFC) clamp loader complex. Acts then as a sliding clamp platform on DNA for several proteins involved in long-patch base excision repair (LP-BER). The 9-1-1 complex stimulates DNA polymerase beta (POLB) activity by increasing its affinity for the 3'-OH end of the primer-template and stabilizes POLB to those sites where LP-BER proceeds; endonuclease FEN1 cleavage activity on substrates with double, nick, or gap flaps of distinct sequences and lengths; and DNA ligase I (LIG1) on long-patch base excision repair substrates. RAD9A possesses 3'->5' double stranded DNA exonuclease activity. Its phosphorylation by PRKCD may be required for the formation of the 9-1-1 complex.

### Sequence similarities

Belongs to the rad9 family.

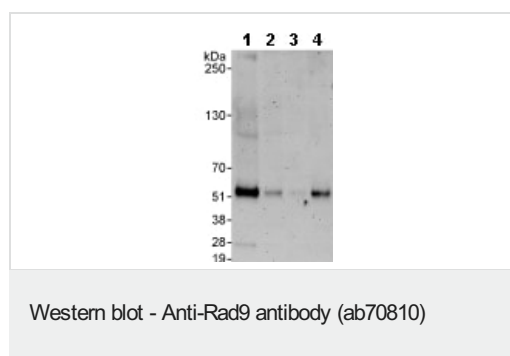
### Post-translational modifications

Constitutively phosphorylated on serine and threonine amino acids in absence of DNA damage. Hyperphosphorylated by PRKCD and ABL1 upon DNA damage. Its phosphorylation by PRKCD may be required for the formation of the 9-1-1 complex.

### Cellular localization

Nucleus.

## Images



**All lanes :** Anti-Rad9 antibody (ab70810) at 0.1 µg/ml

**Lane 1 :** HeLa whole cell lysate at 50 µg

**Lane 2 :** HeLa whole cell lysate at 15 µg

**Lane 3 :** HeLa whole cell lysate at 5 µg

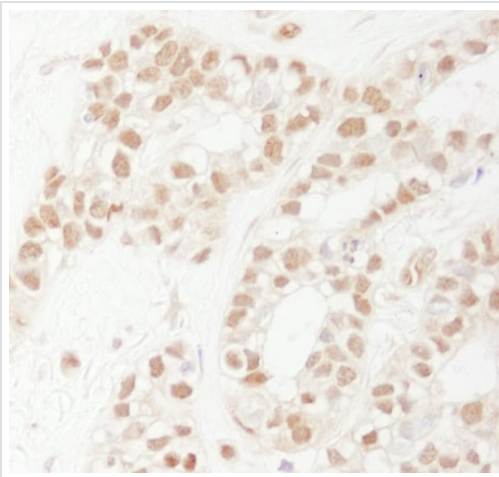
**Lane 4 :** 293T whole cell lysate at 50 µg

Developed using the ECL technique.

**Predicted band size:** 43 kDa

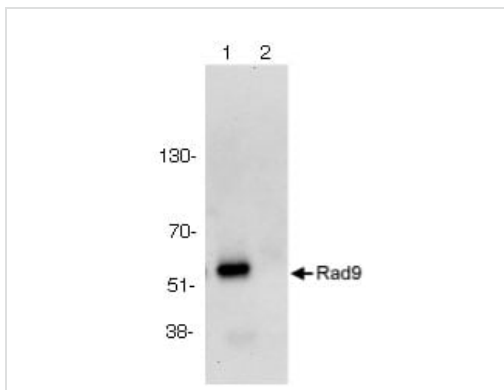
**Observed band size:** 55 kDa

**Exposure time:** 3 minutes



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Rad9 antibody (ab70810)

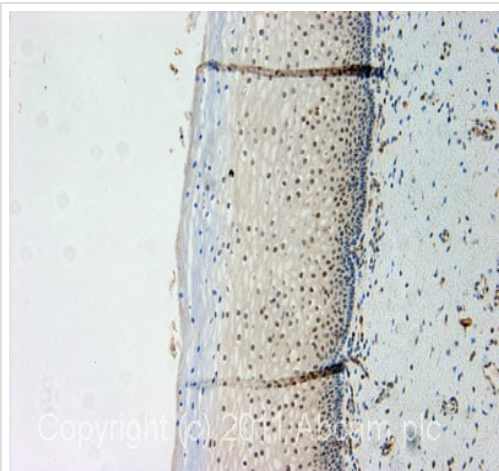
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human breast carcinoma tissue labelling Rad9 with ab70810 at 1/1000 (1µg/ml). Detection: DAB.



Immunoprecipitation - Anti-Rad9 antibody (ab70810)

1mg whole cell lysate from HeLa cells was immunoprecipitated using ab70810 at 3ug/mg of lysate (lane 1) or a control rabbit Ig (lane 2). For the subsequent western blot, 20% of the immunoprecipitate was loaded per lane, and probed with ab70810 at 1ug/ml.

Detection: chemiluminescence with exposure time of 30 seconds.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Rad9 antibody (ab70810)

IHC image of ab70810 staining in human normal cervix formalin fixed paraffin embedded tissue section, performed on a Leica Bond™ system using the standard protocol F. The section was pre-treated using heat mediated antigen retrieval with EDTA (pH9, epitope retrieval solution 2) for 20 mins. The section was then incubated with ab70810, 5µg/ml, for 15 mins at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.

For other IHC staining systems (automated and non-automated) customers should optimize variable parameters such as antigen retrieval conditions, primary antibody concentration and antibody incubation times.

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

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