abcam

Product datasheet

Anti-Rad53 antibody ab104232

★★★★★ 3 Abreviews 59 References 4 Images

Overview

Product name	Anti-Rad53 antibody
Description	Rabbit polyclonal to Rad53
Host species	Rabbit
Tested applications	**Suitable for:** WB
Species reactivity	**Reacts with:** Saccharomyces cerevisiae
Immunogen	Synthetic peptide corresponding to Saccharomyces cerevisiae Rad53 aa 800 to the C-terminus (C terminal) conjugated to keyhole limpet haemocyanin. (Peptide available as **ab134635**)
General notes	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. 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&As

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 or -80°C. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.40 Preservative: 0.02% Sodium azide Constituent: PBS Batches of this product that have a concentration < 1mg/ml may have BSA added as a stabilising agent. If you would like information about the formulation of a specific lot, please contact our scientific support team who will be happy to help.
Purity	Immunogen affinity purified
Clonality	Polyclonal
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab104232 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	★★★★★ (3)	1/2000. Detects a band of approximately 92 kDa (predicted molecular weight: 92 kDa). Abcam recommends using milk as the blocking agent (4%)

Target

Function Controls S-phase checkpoint as well as G1 and G2 DNA damage checkpoints. Phosphorylates proteins on serine, threonine, and tyrosine. Prevents entry into anaphase and mitotic exit after DNA damage via regulation of the Polo kinase CDC5. Seems to be involved in the phosphorylation of RPH1.

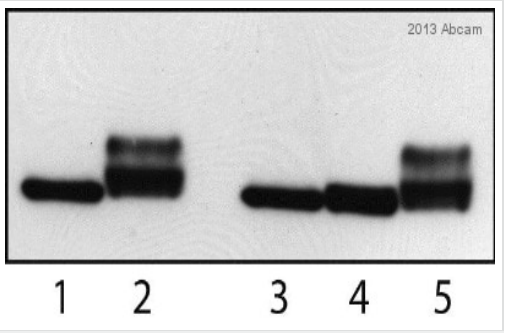
Sequence similarities Belongs to the protein kinase superfamily. CAMK Ser/Thr protein kinase family. CHEK2 subfamily.
Contains 2 FHA domains.
Contains 1 protein kinase domain.

Domain FHA domains are phosphothreonine recognition modules, FHA 1 strongly selects for Asp at position +3 relative to phosphothreonine, whereas FHA 2 selects for Ile in this position.

Post-translational modifications Autophosphorylated.

Cellular localization Nucleus.

Images



Western blot - Anti-Rad53 antibody (ab104232)

This image is courtesy of an abreview submitted by Michela Clerici, University of Milano-Biococca

All lanes : Anti-Rad53 antibody (ab104232) at 1/2000 dilution

Lane 1 : Saccharomyces cerevisiae whole cell lysate from exponentially growing cells- TCA prep.
Lane 2 : Saccharomyces cerevisiae whole cell lysate from exponentially growing cells treated with 20mg/ml phleomycin for 1 hour - TCA prep
Lane 3 : Saccharomyces cerevisiae whole cell lysate from exponentially growing cells- TCA prep
Lane 4 : Saccharomyces cerevisiae whole cell lysate from exponentially growing cells arrested in G2 phase with nocodazole- TCA prep.
Lane 5 : Saccharomyces cerevisiae whole cell lysate from exponentially growing cells arrested in G2 phase with nocodazole and treated with 20mg/ml phleomycin- TCA prep.

Lysates/proteins at 20 µg per lane.

Secondary

All lanes : Amersham anti-rabbit IgG conjugated to HRP at 1/10000 dilution

Developed using the ECL technique.

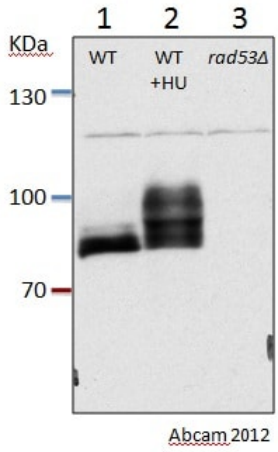
Performed under reducing conditions.

Predicted band size: 92 kDa
Observed band size: 92 kDa
Additional bands at: >92 kDa (possible post-translational modification)

Exposure time: 2 minutes

Blocking: 4% milk for 1 hour

Phosphorylation of Rad53 induced by phleomycin treatment see PubmedID:152856



Western blot - Anti-Rad53 antibody (ab104232)

This image is courtesy of Ilaria Guerini, Gurdon Institute, United Kingdom

All lanes : Anti-Rad53 antibody (ab104232) at 1/2000 dilution

Lane 1 : TCA preps from exponentially growing WT yeast cells.
Lane 2 : TCA preps from exponentially growing WT yeast cells treated with Hydroxyurea (HU).
Lane 3 : TCA preps from exponentially growing rad53delta yeast cells.

Secondary

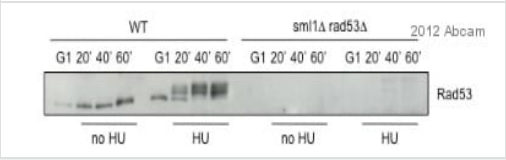
All lanes : 1/10000 dilution

Developed using the ECL technique.

Performed under reducing conditions.

Predicted band size: 92 kDa

Exposure time: 30 seconds



Western blot - Anti-Rad53 antibody (ab104232)

All lanes : Anti-Rad53 antibody (ab104232) at 1/1000 dilution

Lanes 1 & 5 : Alpha-factor arrested WT cells.
Lane 2 : WT cells 20' after release in S-phase.
Lane 3 : WT cells 40' after release in S-phase.
Lane 4 : WT cells 60' after release in S-phase.
Lane 6 : WT cells 20' after release in S-phase in 200mM HU.
Lane 7 : WT cells 40' after release in S-phase in 200mM HU.
Lane 8 : WT cells 60' after release in S-phase in 200mM HU.
Lanes 9 & 13 : Alpha-factor arrested rad53delta cells.
Lane 10 : rad53delta cells 20' after release in S-phase.
Lane 11 : rad53delta cells 40' after release in S-phase.
Lane 12 : rad53delta cells 60' after release in S-phase.
Lane 14 : rad53delta cells 20' after release in S-phase in 200mM HU.
Lane 15 : rad53delta cells 40' after release in S-phase in 200mM HU.
Lane 16 : rad53delta cells 60' after release in S-phase in 200mM HU.

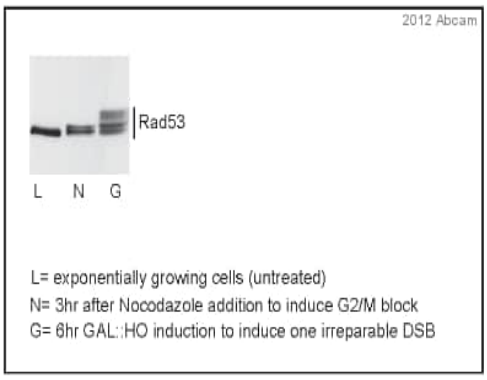
Secondary
All lanes : Donkey Anti-Rabbit IgG H&L (HRP) (**ab16284**) at 1/2000 dilution

Developed using the ECL technique.

Performed under reducing conditions.

Predicted band size: 92 kDa
Additional bands at: 92 kDa (possible post-translational modification)

Exposure time: 2 minutes



Western blot - Anti-Rad53 antibody (ab104232)

Western blot showing ab104232 detecting Rad53 in both its unphosphorylated and phosphorylated status. ab104232 was used at 1:2000 dilution.

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

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