


Product datasheet

Anti-Rad50 antibody - N-terminal ab228935

[7 Images](#)

Overview

Product name	Anti-Rad50 antibody - N-terminal
Description	Rabbit polyclonal to Rad50 - N-terminal
Host species	Rabbit
Tested applications	Suitable for: WB, IP, IHC-P
Species reactivity	Reacts with: Mouse, Rat, Human Predicted to work with: Rabbit, Cow 
Immunogen	Recombinant fragment within Human Rad50 (N terminal). The exact sequence is proprietary. Database link: Q92878
Positive control	WB: HeLa whole cell and nuclear extracts. Neuro-2a, NT2/D1, PC-12 and GL261 whole cell lysate. IHC-P: Human lung carcinoma tissue. IP: NT2/D1 whole cell extract.
General notes	<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&As</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	pH: 7.00 Preservative: 0.01% Thimerosal (merthiolate) Constituents: 1.21% Tris, 0.75% Glycine, 20% Glycerol (glycerin, glycerine)
Purity	Immunogen affinity purified
Clonality	Polyclonal
Isotype	IgG

Applications

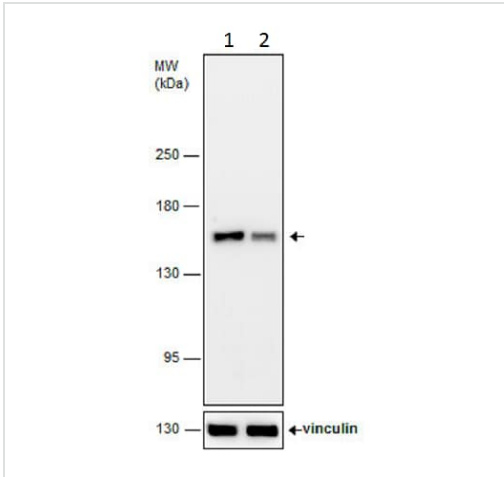
The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab228935 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB		1/500 - 1/10000. Predicted molecular weight: 154 kDa.
IP		1/100 - 1/500.
IHC-P		1/100 - 1/1000.

Target

Function	Component of the MRN complex, which plays a central role in double-strand break (DSB) repair, DNA recombination, maintenance of telomere integrity and meiosis. The complex possesses single-strand endonuclease activity and double-strand-specific 3'-5' exonuclease activity, which are provided by MRE11A. RAD50 may be required to bind DNA ends and hold them in close proximity. This could facilitate searches for short or long regions of sequence homology in the recombining DNA templates, and may also stimulate the activity of DNA ligases and/or restrict the nuclease activity of MRE11A to prevent nucleolytic degradation past a given point. The complex may also be required for DNA damage signaling via activation of the ATM kinase. In telomeres the MRN complex may modulate t-loop formation.
Tissue specificity	Expressed at very low level in most tissues, except in testis where it is expressed at higher level. Expressed in fibroblasts.
Involvement in disease	Defects in RAD50 are the cause of Nijmegen breakage syndrome-like disorder (NBSLD) [MIM:613078]; also called NBS-like disorder or RAD50 deficiency. NBSLD is a disorder similar to Nijmegen breakage syndrome and characterized by chromosomal instability, radiation sensitivity, microcephaly, growth retardation, short stature and bird-like face. Immunodeficiency is absent.
Sequence similarities	Belongs to the SMC family. RAD50 subfamily. Contains 1 zinc-hook domain.
Domain	The zinc-hook, which separates the large intramolecular coiled coil regions, contains 2 Cys residues that coordinate one molecule of zinc with the help of the 2 Cys residues of the zinc-hook of another RAD50 molecule, thereby forming a V-shaped homodimer. The two heads of the homodimer, which constitute the ATP-binding domain, interact with the MRE11A homodimer.
Post-translational modifications	Phosphorylated upon DNA damage, probably by ATM or ATR.
Cellular localization	Nucleus. Chromosome > telomere. Localizes to discrete nuclear foci after treatment with genotoxic agents.

Images



Western blot - Anti-Rad50 antibody - N-terminal (ab228935)

All lanes : Anti-Rad50 antibody - N-terminal (ab228935) at 1/4000 dilution

Lane 1 : Non-transfected HeLa (human epithelial cell line from cervix adenocarcinoma) whole cell extracts

Lane 2 : Rad50 shRNA transfected HeLa (human epithelial cell line from cervix adenocarcinoma) whole cell extracts

Lysates/proteins at 30 µg per lane.

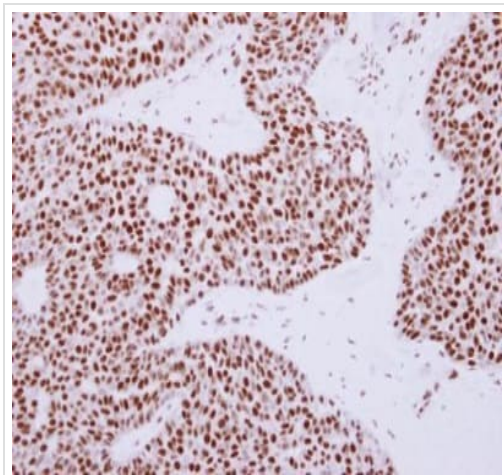
Secondary

All lanes : HRP-conjugated anti-rabbit IgG

Developed using the ECL technique.

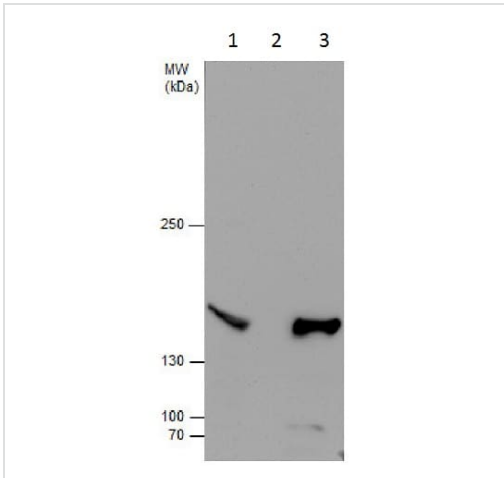
Predicted band size: 154 kDa

5% SDS-PAGE



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Rad50 antibody - N-terminal (ab228935)

Paraffin-embedded human lung carcinoma tissue stained for Rad50 with ab228935 at a 1/250 dilution in immunohistochemical analysis.



Immunoprecipitation - Anti-Rad50 antibody - N-terminal (ab228935)

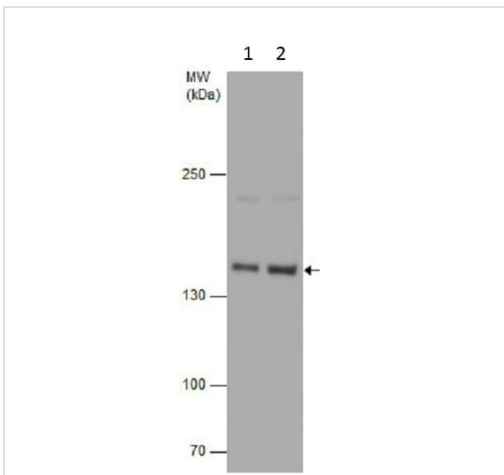
Rad50 was immunoprecipitated from NT2/D1 (human embryonal testis carcinoma cell line) whole cell lysate with 4 µg ab228935. Western blot was performed from the immunoprecipitate using ab228935 at a 1/500 dilution.

Lane 1: 50 µg NT2/D1 whole cell lysate.

Lane 2: Control with 4 µg preimmune Rabbit IgG.

Lane 3: ab228935 in NT2/D1 whole cell lysate.

5% SDS-PAGE



Western blot - Anti-Rad50 antibody - N-terminal (ab228935)

All lanes : Anti-Rad50 antibody - N-terminal (ab228935) at 1/500 dilution

Lane 1 : HeLa (human epithelial cell line from cervix adenocarcinoma) whole cell extracts

Lane 2 : HeLa (human epithelial cell line from cervix adenocarcinoma) nuclear extracts

Lysates/proteins at 30 µg per lane.

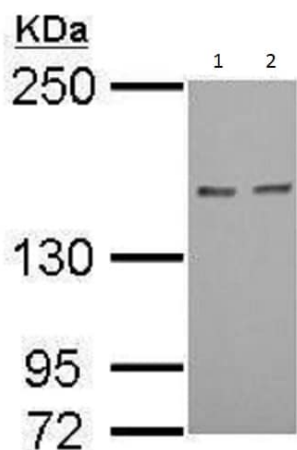
Secondary

All lanes : HRP-conjugated anti-rabbit IgG

Developed using the ECL technique.

Predicted band size: 154 kDa

5% SDS-PAGE



Western blot - Anti-Rad50 antibody - N-terminal (ab228935)

All lanes : Anti-Rad50 antibody - N-terminal (ab228935) at 1/1000 dilution

Lane 1 : Neuro-2a (mouse neuroblastoma cell line) whole cell lysate

Lane 2 : GL261 whole cell lysate

Lysates/proteins at 30 µg per lane.

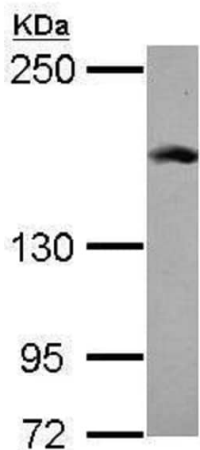
Secondary

All lanes : HRP-conjugated anti-rabbit IgG

Developed using the ECL technique.

Predicted band size: 154 kDa

5% SDS-PAGE



Western blot - Anti-Rad50 antibody - N-terminal (ab228935)

Anti-Rad50 antibody - N-terminal (ab228935) at 1/5000 dilution + NT2/D1 (human embryonal testis carcinoma cell line) whole cell lysate at 30 µg

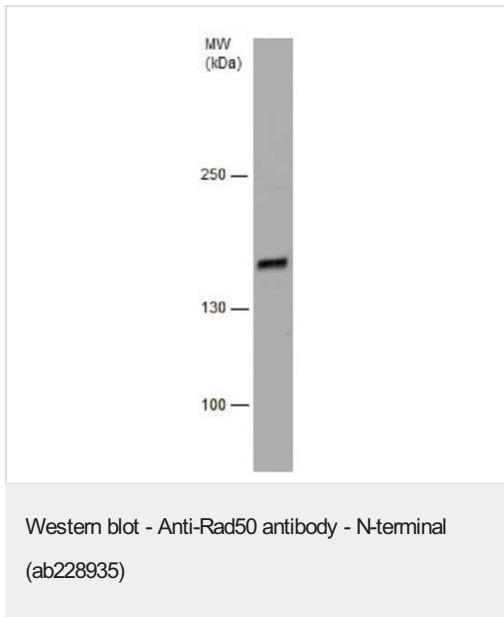
Secondary

HRP-conjugated anti-rabbit IgG

Developed using the ECL technique.

Predicted band size: 154 kDa

5% SDS-PAGE



Anti-Rad50 antibody - N-terminal (ab228935) at 1/1000 dilution + PC-12 (rat adrenal gland pheochromocytoma cell line) whole cell extracts at 30 µg

Secondary

HRP-conjugated anti-rabbit IgG

Developed using the ECL technique.

Predicted band size: 154 kDa

5% SDS-PAGE

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