


Anti-BRCA2 antibody ab123491

★★★★★ [3 Abreviews](#) [16 References](#) [3 Images](#)

Overview

Product name	Anti-BRCA2 antibody
Description	Rabbit polyclonal to BRCA2
Host species	Rabbit
Tested applications	Suitable for: WB, IP
Species reactivity	Reacts with: Human Predicted to work with: Chimpanzee, Rhesus monkey, Gorilla, Orangutan 
Immunogen	Synthetic peptide, corresponding to a region within amino acids 450-500 of Human BRCA2 using the numbering given in entry NP_000050.1.
Positive control	Whole cell lysate from 293T, HeLa and Jurkat cells
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. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles.
Storage buffer	<p>pH: 7</p> <p>Preservative: 0.09% Sodium azide</p> <p>Constituent: 99% Tris citrate/phosphate</p>
Purity	pH 7 to 8
Clonality	Immunogen affinity purified
Isotype	Polyclonal
	IgG

Applications

The Abpromise guarantee

Our **Abpromise guarantee** covers the use of ab123491 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	★★★★★ (2)	1/2000 - 1/10000. Predicted molecular weight: 384 kDa.
IP		Use at 2-10 µg/mg of lysate.

Target

Function

Involved in double-strand break repair and/or homologous recombination. Binds RAD51 and potentiates recombinational DNA repair by promoting assembly of RAD51 onto single-stranded DNA (ssDNA). Acts by targeting RAD51 to ssDNA over double-stranded DNA, enabling RAD51 to displace replication protein-A (RPA) from ssDNA and stabilizing RAD51-ssDNA filaments by blocking ATP hydrolysis. May participate in S phase checkpoint activation. Binds selectively to ssDNA, and to ssDNA in tailed duplexes and replication fork structures.

Tissue specificity

Highest levels of expression in breast and thymus, with slightly lower levels in lung, ovary and spleen.

Involvement in disease

Defects in BRCA2 are a cause of susceptibility to breast cancer (BC) [MIM:114480]. A common malignancy originating from breast epithelial tissue. Breast neoplasms can be distinguished by their histologic pattern. Invasive ductal carcinoma is by far the most common type. Breast cancer is etiologically and genetically heterogeneous. Important genetic factors have been indicated by familial occurrence and bilateral involvement. Mutations at more than one locus can be involved in different families or even in the same case.

Defects in BRCA2 are the cause of pancreatic cancer type 2 (PNCA2) [MIM:613347]. It is a malignant neoplasm of the pancreas. Tumors can arise from both the exocrine and endocrine portions of the pancreas, but 95% of them develop from the exocrine portion, including the ductal epithelium, acinar cells, connective tissue, and lymphatic tissue.

Defects in BRCA2 are a cause of susceptibility to breast-ovarian cancer familial type 2 (BROVCA2) [MIM:612555]. A condition associated with familial predisposition to cancer of the breast and ovaries. Characteristic features in affected families are an early age of onset of breast cancer (often before age 50), increased chance of bilateral cancers (cancer that develop in both breasts, or both ovaries, independently), frequent occurrence of breast cancer among men, increased incidence of tumors of other specific organs, such as the prostate.

Defects in BRCA2 are the cause of Fanconi anemia complementation group D type 1 (FANCD1) [MIM:605724]. It is a disorder affecting all bone marrow elements and resulting in anemia, leukopenia and thrombopenia. It is associated with cardiac, renal and limb malformations, dermal pigmentary changes, and a predisposition to the development of malignancies. At the cellular level it is associated with hypersensitivity to DNA-damaging agents, chromosomal instability (increased chromosome breakage) and defective DNA repair.

Defects in BRCA2 are a cause of glioma type 3 (GLM3) [MIM:613029]. Gliomas are benign or malignant central nervous system neoplasms derived from glial cells. They comprise astrocytomas and glioblastoma multiforme that are derived from astrocytes, oligodendrogliomas derived from oligodendrocytes and ependymomas derived from ependymocytes.

Sequence similarities

Contains 8 BRCA2 repeats.

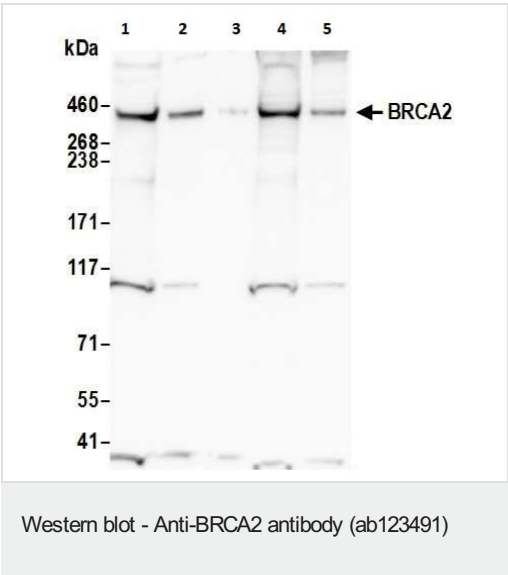
Post-translational

Phosphorylated by ATM upon irradiation-induced DNA damage.

modifications

Ubiquitinated in the absence of DNA damage; this does not lead to proteasomal degradation. In contrast, ubiquitination in response to DNA damage leads to proteasomal degradation.

Images

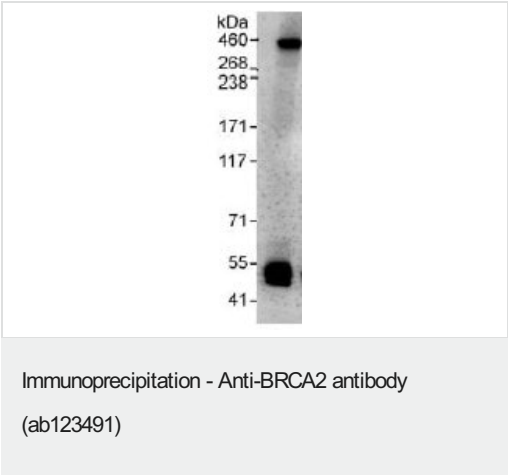


All lanes : Anti-BRCA2 antibody (ab123491) at 0.1 µg/ml

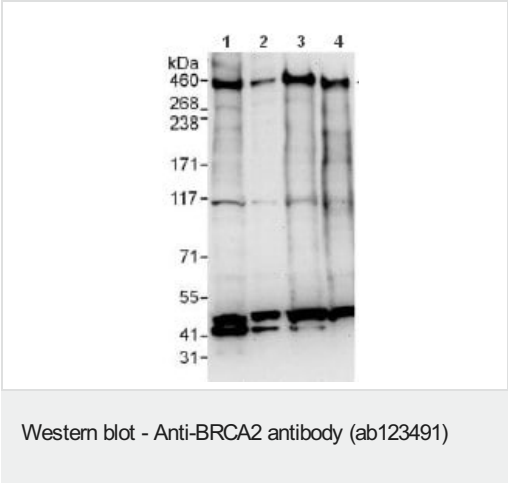
- Lane 1 : 293T whole cell lysate at 50 µg
- Lane 2 : 293T whole cell lysate at 15 µg
- Lane 3 : 293T whole cell lysate at 5 µg
- Lane 5 : HeLa whole cell lysate at 50 µg
- Lane 6 : HeLa whole cell lysate at 15 µg

Predicted band size: 384 kDa

Exposure time: 30 seconds



Detection of Human BRCA2 by Immunoprecipitation from HeLa whole cell lysate (1 mg for IP, 20% of IP loaded), using ab123491 at 6 µg/mg lysate. Subsequent Western blot detection used ab123491 at 1 µg/ml. Detection: Chemiluminescence with an exposure time of 10 seconds.



All lanes : Anti-BRCA2 antibody (ab123491) at 0.1 µg/ml

- Lane 1 : Whole cell lysate from HeLa at 50 µg/ml
- Lane 2 : Whole cell lysate from HeLa at 15 µg/ml
- Lane 3 : Whole cell lysate from 293T at 50 µg/ml
- Lane 4 : Whole cell lysate from Jurkat at 50 µg/ml

Developed using the ECL technique.

Predicted band size: 384 kDa

Exposure time: 10 minutes

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

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