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Product datasheet

Anti-BRCA2 antibody ab27976

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Overview

Product name	Anti-BRCA2 antibody
Description	Rabbit polyclonal to BRCA2
Host species	Rabbit
Tested applications	**Suitable for:** WB
Species reactivity	**Reacts with:** Human
Immunogen	Synthetic peptide mapping to the N terminus of human BRCA2.
General notes	This product is manufactured by BioVision, an Abcam company and was previously called 3675 Anti-BRCA2 Antibody. 3675-100 is the same size as the 100 µg size of ab27976. 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. Upon delivery aliquot and store at -20°C or -80°C. Avoid repeated freeze / thaw cycles.
Storage buffer	Preservative: 0.03% Proclin 300 Constituents: PBS, 30% Glycerol (glycerin, glycerine), 0.5% BSA, 0.015% EDTA
Purity	Immunogen affinity purified
Purification notes	This antibody is peptide affinity purified
Clonality	Polyclonal
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab27976 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)**	Use a concentration of 1 - 4 µg/ml. Predicted molecular weight: 384 kDa.

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.

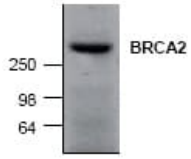
Tissue specificity
Highest levels of expression in breast and thymus, with slightly lower levels in lung, ovary and spleen.

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 modifications
Phosphorylated by ATM upon irradiation-induced DNA damage.
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



Western blot - Anti-BRCA2 antibody (ab27976)

Anti-BRCA2 antibody (ab27976) at 4 µg/ml + HeLa (human epithelial cell line from cervix adenocarcinoma) cell lysate

Predicted band size: 384 kDa

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

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