abcam

Product datasheet

Anti-BRCA2 antibody ab9143

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Overview

Product name	Anti-BRCA2 antibody
Description	Rabbit polyclonal to BRCA2
Host species	Rabbit
Tested applications	**Suitable for:** ICC/IF, IP, WB
Species reactivity	**Reacts with:** Human **Predicted to work with:** Chimpanzee, Gorilla
Immunogen	Synthetic peptide corresponding to Human BRCA2.
Positive control	Purchase matching WB positive control: **Recombinant Human BRCA2 protein**

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles.
Storage buffer	Preservative: 0.09% Sodium azide Constituents: 0.021% PBS, 1.764% Sodium citrate, 1.815% Tris
Purity	Immunogen affinity purified
Purification notes	Antibodies were affinity purified using the peptide immobilized on solid support. Antibody concentration was determined by extinction coefficient: absorbance at 280 nmof 1.4 equals 1.0 mg of IgG.
Clonality	Polyclonal
Isotype	IgG

Applications

Our Abpromise guarantee covers the use of **ab9143** in the following tested applications.

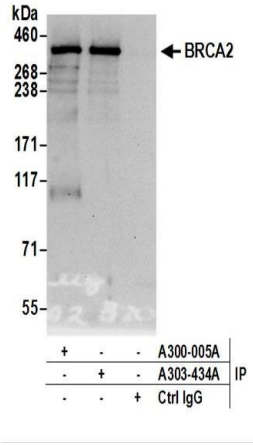
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
ICC/IF		Use at an assay dependent concentration. PubMed: 12915460
IP		Use a concentration of 1 - 4 µg/ml.
WB	★★★★☆	1/1000 - 1/10000. Detects a band of approximately 380 kDa (predicted molecular weight: 380 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



Immunoprecipitation - Anti-BRCA2 antibody (ab9143)

ab9143 immunoprecipitating BRCA2 at 6 µg per reaction.

Lane 1: ab9143 in HEK2936 cell lysate.

Lane 2: Rabbit polyclonal antibody (ab123491) used instead of ab9143 in 293T cell lysate

Lane 3 (control): Secondary antibody only control

For blotting, ab9143 immunoprecipitated BRAC2 at 1 µg/ml. Detected by Chemiluminescence.

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