10320 Camino Santa Fe, Suite G
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BRCA2 Antibody
Rabbit Polyclonal Antibody
Catalog # ABV10511

Specification

BRCA2 Antibody - Product Information

Application	**WB**
Primary Accession	P51587
Reactivity	**Human, Mouse**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Calculated MW	**384230**

BRCA2 Antibody - Additional Information

Gene ID 675

Application & Usage	**Western blotting (0.5-4 µg/ml). However, the optimal conditions should be determined individually. HeLa cell lysate can be used as a positive control.**

Other Names
Breast Cancer Susceptibility Protein 2, Early Onset; FANCB, FANCD1, FACD , FANCB , FAD1 , FAD , FANCD1 , BRCC2 , OTTHUMP00000042401

Target/Specificity
BRCA2

Antibody Form
Liquid

Appearance
Colorless liquid

Formulation
100 µg (0.5 mg/ml) affinity purified rabbit anti-BRCA2 polyclonal antibody in phosphate buffered saline (PBS), pH 7.2, containing 30% glycerol, 0.5% BSA, 0.01% thimerosal.

Handling
The antibody solution should be gently mixed before use.

Reconstitution & Storage
-20 °C

Background Descriptions

Precautions
BRCA2 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

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BRCA2 Antibody - Protein Information

Name BRCA2 (HGNC:1101)

Synonyms FACD, FANCD1

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. Part of a PALB2-scaffolded HR complex containing RAD51C and which is thought to play a role in DNA repair by HR. May participate in S phase checkpoint activation. Binds selectively to ssDNA, and to ssDNA in tailed duplexes and replication fork structures. May play a role in the extension step after strand invasion at replication-dependent DNA double-strand breaks; together with PALB2 is involved in both POLH localization at collapsed replication forks and DNA polymerization activity. In concert with NPM1, regulates centrosome duplication. Interacts with the TREX-2 complex (transcription and export complex 2) subunits PCID2 and SEM1, and is required to prevent R-loop-associated DNA damage and thus transcription-associated genomic instability. Silencing of BRCA2 promotes R-loop accumulation at actively transcribed genes in replicating and non-replicating cells, suggesting that BRCA2 mediates the control of R-loop associated genomic instability, independently of its known role in homologous recombination (PubMed:24896180).

Cellular Location
Nucleus. Cytoplasm, cytoskeleton, microtubule organizing center, centrosome. Note=Colocalizes with ERCC5/XPG to nuclear foci following DNA replication stress

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

BRCA2 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

BRCA2 Antibody - Images

BRCA2 Antibody - Background

BRCA 1 and 2 are breast cancer susceptibility proteins that play a role in DNA damage, repair, cell cycle progression, transcription and apoptosis, etc. The BRCA1 gene is expressed in numerous tissues, including breast and ovary, and encodes a predicted protein of 1863 amino acids. BRCA2 has been shown to be required for localization of Rad51 to sites of DSBs (double stranded breaks) in DNA. Cells lacking BRCA1 and BRCA2 cannot repair DSBs thro µgh the Rad51-dependent process.