

BRCA2 Antibody
Purified Mouse Monoclonal Antibody (Mab)
Catalog # AM8529b

Specification

BRCA2 Antibody - Product Information

Application	WB,E
Primary Accession	P51587
Reactivity	Human
Host	Mouse
Clonality	monoclonal
Isotype	IgG1,k

BRCA2 Antibody - Additional Information

Gene ID 675

Other Names

Breast cancer type 2 susceptibility protein, Fanconi anemia group D1 protein, BRCA2, FACD, FANCD1

Target/Specificity

This BRCA2 antibody is generated from a mouse immunized with a recombinant protein between 251-495 amino acids from human BRCA2.

Dilution

WB~~1:2000

Format

Purified monoclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein G column, followed by dialysis against PBS.

Storage

Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions

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

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

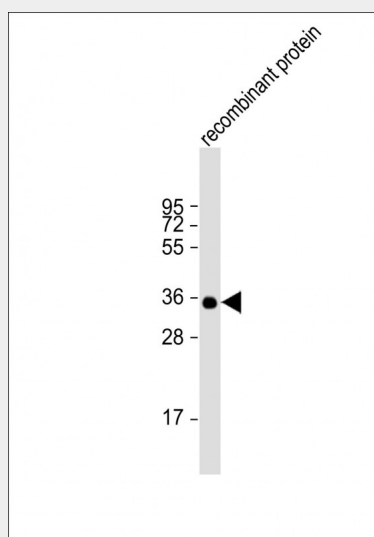
Highest levels of expression in breast and thymus, with slightly lower levels in lung, ovary and spleen

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 Cytometry](#)
- [Cell Culture](#)

BRCA2 Antibody - Images



Anti-BRCA2 Antibody at 1:2000 dilution + recombinant protein Lysates/proteins at 20 µg per lane. Secondary Goat Anti-mouse IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 384 kDa Blocking/Dilution buffer: 5% NFD/MTBST.

BRCA2 Antibody - Background

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 DSS1, 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).

BRCA2 Antibody - References

Wooster R., et al. Nature 378:789-792(1995).
Tavtigian S.V., et al. Nat. Genet. 12:333-337(1996).
Dunham A., et al. Nature 428:522-528(2004).
Ozcelik H., et al. Nat. Genet. 16:17-18(1997).
Hussain S., et al. Hum. Mol. Genet. 13:1241-1248(2004).