

BRCA2 (C-19): sc-1817

BACKGROUND

In 1990, a breast cancer susceptibility gene designated BRCA1 was localized to chromosome 17q. Mutations within this gene are believed to account for approximately 45% of families with high incidence of breast cancer and at least 80% of families with increased incidence of both early-onset breast cancer and ovarian cancer. A second breast cancer susceptibility gene, BRCA2 (breast cancer 2, early onset), located on chromosome 13q13.1, also confers a high incidence of breast cancer but, unlike BRCA1, does not confer a substantially elevated risk of ovarian cancer. Both BRCA1 and BRCA2 play a role in the maintenance of genome stability, particularly in the homologous recombination pathway for double-strand DNA repair. BRCA2 is regarded as a tumor suppressor gene; tumors with BRCA2 mutations exhibit loss of heterozygosity (LOH) of the wildtype allele. The protein encoded by the BRCA2 gene contains multiple copies of a 70 amino acid motif called the BRC motif. These motifs effect binding to the Rad51 recombinase, which operates in DNA repair.

CHROMOSOMAL LOCATION

Genetic locus: BRCA2 (human) mapping to 13q13.1.

SOURCE

BRCA2 (C-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of BRCA2 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-1817 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

APPLICATIONS

BRCA2 (C-19) is recommended for detection of BRCA2 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for BRCA2 siRNA (h): sc-29825, BRCA2 shRNA Plasmid (h): sc-29825-SH and BRCA2 shRNA (h) Lentiviral Particles: sc-29825-V.

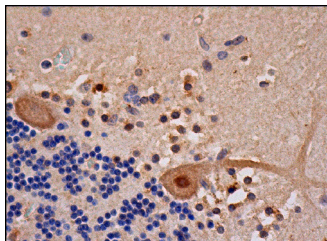
Molecular Weight of BRCA2: 390 kDa.

Positive Controls: HeLa nuclear extract: sc-2120.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 3) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



BRCA2 (C-19): sc-1817. Immunoperoxidase staining of formalin fixed, paraffin-embedded human cerebellum tissue showing nuclear and cytoplasmic staining of Purkinje cells and cytoplasmic staining of cells in granular layer and cells in molecular layer.

SELECT PRODUCT CITATIONS

1. Preobrazhenska, O., et al. 2002. BRCA2 and Smad3 synergize in regulation of gene transcription. *Oncogene* 21: 5660-5664.
2. Fustier, P., et al. 2003. Resveratrol increases BRCA1 and BRCA2 mRNA expression in breast tumour cell lines. *Br. J. Cancer* 89: 168-172.
3. Fan, S., et al. 2006. BRCA1 and BRCA2 as molecular targets for phytochemicals indole-3-carbinol and genistein in breast and prostate cancer cells. *Br. J. Cancer* 94: 407-426.
4. Almeida, L.O., et al. 2012. SET overexpression decreases cell detoxification efficiency: ALDH2 and GSTP1 are downregulated, DDR is impaired and DNA damage accumulates. *FEBS J.* 279: 4615-4628.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

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Try **BRCA2 (3D12): sc-293185**, our highly recommended monoclonal alternative to BRCA2 (C-19).