SANTA CRUZ BIOTECHNOLOGY, INC.

BRCA2 (I-17): sc-1818

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 maintainance 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 (I-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-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-1818 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.

APPLICATIONS

BRCA2 (I-17) is recommended for detection of BRCA2 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], 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).

BRCA2 (I-17) is also recommended for detection of BRCA2 in additional species, including canine.

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.

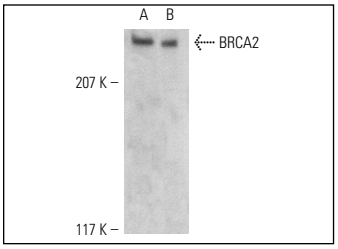
Molecular Weight of BRCA2: 390 kDa.

Positive Controls: HeLa nuclear extract: sc-2120, ZR-75-1 cell lysate: sc-2241 or A-431 whole cell lysate: sc-2201.

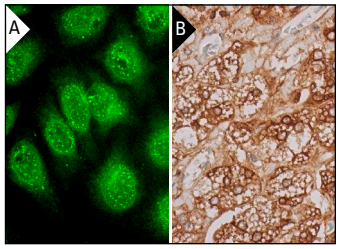
RECOMMENDED SECONDARY REAGENTS

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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. 4) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



BRCA2 (I-17): sc-1818. Western blot analysis of BRCA2 expression in HeLa nuclear extract (**A**) and A-431 whole cell lysate (**B**).



BRCA2 (I-17): sc-1818. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human adrenal gland tissue showing cytoplasmic, membrane and nuclear staining of glandular cells (**B**).

SELECT PRODUCT CITATIONS

1. Lemasson, I., et al. 2002. Transcription factor binding and histone modifications on the integrated proviral promoter in human T-cell leukemia virus-I-infected T cells. J. Biol. Chem. 277: 49459-49465.
2. Lin, H.R., et al. 2003. M phase-specific phosphorylation of BRCA2 by Polo-like kinase 1 correlates with the dissociation of the BRCA2-P/CAF complex. J. Biol. Chem. 278: 35979-35987.

RESEARCH USE

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

PROTOCOLS

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