SANTA CRUZ BIOTECHNOLOGY, INC.

BRCA2 (184H2N): sc-517636

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 13q12.3, 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.

REFERENCES

1. Wooster, R., et al. 1994. Localization of a breast cancer susceptibility gene, BRCA2, to chromosome 13q12-13. Science 265: 2088-2090.
2. Collins, N., et al. 1995. Consistent loss of the wildtype allele in breast cancers from a family linked to the BRCA2 gene on chromosome 13q12-13. Oncogene 10: 1673-1675.
3. Kerangueven F, et al. 1995. Patterns of loss of heterozygosity at loci from chromosome arm 13q suggests a possible involvement of BRCA2 in sporadic breast tumors. Genes Chromosomes Cancer 13: 291-294.
4. Couch, F.J., et al. 1996. BRCA2 germline mutations in male breast cancer cases and breast cancer families. Nat. Genet. 13: 123-125.
5. Frappart, P.O. and McKinnon, P.J. 2007. BRCA2 function and the central nervous system. Cell Cycle 6: 2453-2457.
6. Akbari, M.R., et al. 2008. Germline BRCA2 mutations and the risk of esophageal squamous cell carcinoma. Oncogene 27: 1290-1296.
7. Seymour, I.J., et al. 2008. Disease family history and modification of breast cancer risk in common BRCA2 variants. Oncol. Rep. 19: 783-786.

CHROMOSOMAL LOCATION

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

SOURCE

BRCA2 (184H2N) is a mouse monoclonal antibody raised against recombinant BRCA2 of human origin.

PRODUCT

Each vial contains 100 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

BRCA2 (184H2N) is recommended for detection of BRCA2 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000).

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.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

RESEARCH USE

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

PROTOCOLS

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