

BRCA2 (T-18): sc-21230

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 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.

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., et al. 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.

CHROMOSOMAL LOCATION

Genetic locus: BRCA2 (human) mapping to 13q12.3.

SOURCE

BRCA2 (T-18) 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-21230 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 (T-18) 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) 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.

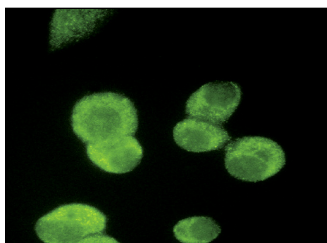
Molecular Weight of BRCA2: 390 kDa.

Positive Controls: HeLa nuclear extract: sc-2120, 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) 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.

DATA



BRCA2 (T-18): sc-21230. Immunofluorescence staining of methanol-fixed ZR-75-1 cells showing nuclear and cytoplasmic localization.

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.



Try **BRCA2 (3D12): sc-293185**, our highly recommended monoclonal alternative to BRCA2 (T-18).