



BRAF35 (T-18): sc-23683

BACKGROUND

The breast cancer susceptibility gene (BRCA1) localizes to chromosome 17q. Mutations within this gene 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, located on chromosome 13q12-13, also confers a high incidence of breast cancer, but unlike BRCA1, BRCA2 does not confer a substantially elevated risk of ovarian cancer. The BRCA2-associated factor 35 (BRAF35) protein forms a complex with BRCA2, which associates with condensed chromatin during Histone-H3 phosphorylation. BRAF35 expression levels are highest in proliferating tissues and parallel BRCA2 expression patterns. The structure of BRAF35 includes a kinesin-like coiled-coil domain and a nonspecific DNA binding HMG domain. The chromatin localization of BRAF35 and antibody microinjection studies indicate a role for the BRAF35/BRCA2 complex in cell cycle regulation.

REFERENCES

- Hall, J.M., et al. 1990. Linkage of early-onset familial breast cancer to chromosome 17q21. *Science* 250: 1684-1689.
- Narod, S.A., et al. 1991. Familial breast-ovarian cancer locus on chromosome 17q12-q23. *Lancet* 338: 82-83.
- Wooster, R., et al. 1994. Localization of a breast cancer susceptibility gene, BRCA2, to chromosome 13q12-13. *Science* 265: 2088-2090.
- Futreal, P.A., et al. 1994. BRCA1 mutations in primary breast and ovarian carcinomas. *Science* 266: 120-122.
- Marmorstein, L.Y., et al. 2001. A human BRCA2 complex containing a structural DNA binding component influences cell cycle progression. *Cell* 104: 247-257.
- Hakimi, M.A., et al. 2002. A core-BRAF35 complex containing Histone Deacetylase mediates repression of neuronal-specific genes. *Proc. Natl. Acad. Sci. USA* 99: 7420-7425.

CHROMOSOMAL LOCATION

Genetic locus: HMG20B (human) mapping to 19p13.3.

SOURCE

BRAF35 (T-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of BRAF35 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-23683 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

BRAF35 (T-18) is recommended for detection of BRAF35 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for BRAF35 siRNA (h): sc-37536, BRAF35 shRNA Plasmid (h): sc-37536-SH and BRAF35 shRNA (h) Lentiviral Particles: sc-37536-V.

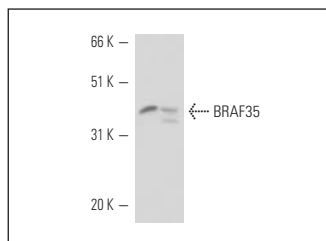
Molecular Weight of BRAF35: 36 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, HeLa nuclear extract: sc-2120 or MCF7 nuclear extract: sc-2149.

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.

DATA



BRAF35 (T-18): sc-23683. Western blot analysis of BRAF35 expression in HeLa (A) and A-431 (B) nuclear extracts.

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.