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, located on chromosome 13q12-q13, also confers a high incidence of breast cancer but, unlike BRCA1, does not confer a substantially elevated risk of ovarian cancer. The BRCA1 gene is expressed in numerous tissues, including breast and ovary, and encodes a predicted protein of 1,863 amino acids. This protein contains a zinc-finger domain in its amino-terminal region, but is otherwise unrelated to any previously described proteins. Like many other genes involved in familial cancer, BRCA1 appears to encode a tumor suppressor, a protein that acts as a negative regulator of tumor growth.

REFERENCES


CHROMOSOMAL LOCATION

Genetic locus: Brca1 (mouse) mapping to 11 D.

SOURCE

BRCA1 (247.56) is a mouse monoclonal antibody raised against recombinant BRCA1 of mouse origin.

PRODUCT

Each vial contains 200 µg IgG2b kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

BRCA1 (247.56) is available conjugated to agarose (sc-135731 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-135731 HRP), 200 µg/ml, for WB, IHCP and ELISA; to either phycoerythrin (sc-135731 PE), fluorescein (sc-135731 FITC), Alexa Fluor® 488 (sc-135731 AF488), Alexa Fluor® 546 (sc-135731 AF546), Alexa Fluor® 594 (sc-135731 AF594) or Alexa Fluor® 647 (sc-135731 AF647), 200 µg/ml, for WB (RGB), IF, IHCP and FCM; and to either Alexa Fluor® 680 (sc-135731 AF680) or Alexa Fluor® 790 (sc-135731 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

BRCA1 (247.56): sc-135731. Western blot analysis of BRCA1 expression in TK-1 whole cell lysate.

APPLICATIONS

BRCA1 (247.56) is recommended for detection of BRCA1 of mouse 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)) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:300).

Suitable for use as control antibody for BRCA1 siRNA (m): sc-29824, BRCA1 shRNA Plasmid (m): sc-29824-SH and BRCA1 shRNA (m) Lentiviral Particles: sc-29824-V.

Molecular Weight of BRCA1: 220 kDa.

Positive Controls: TK-1 whole cell lysate: sc-364798, NIH/3T3 nuclear extract: sc-2138 or 3T3-L1 cell lysate: sc-2243.

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 Luminal Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

DATA

SELECT PRODUCT CITATIONS


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. Not for resale.

PROTOCOLS

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