SANTA CRUZ BIOTECHNOLOGY, INC.

PLD6 (G-16): sc-243817

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

PLD6 (phospholipase D family, member 6), also known as phospholipase D6, choline phosphatase 6 or phosphatidylcholine-hydrolyzing phospholipase D6, is a 252 amino acid single-pass membrane protein that catalyzes the conversion of phosphatidylcholine to choline and phosphatidate. A member of the phospholipase D family, PLD6 contains one PLD phosphodiesterase domain and is encoded by a gene that maps to human chromosome 17, which comprises over 2.5% of the human genome and encodes over 1,200 genes. Two key tumor suppressor genes are associated with chromosome 17, namely, p53 and BRCA1. Tumor suppressor p53 is necessary for maintenance of cellular genetic integrity. Malfunction or loss of p53 expression is associated with malignant cell growth and Li-Fraumeni syndrome. Like p53, BRCA1 is directly involved in DNA repair, though specifically it is recognized as a genetic determinant of early onset breast cancer.

REFERENCES

1. Hall, J.M., et al. 1992. Closing in on a breast cancer gene on chromosome 17q. Am. J. Hum. Genet. 50: 1235-1242.
2. Evans, S.C., et al. 1997. The Li-Fraumeni syndrome: an inherited susceptibility to cancer. Mol. Med. Today 3: 390-395.
3. Varley, J.M., et al. 1997. A detailed study of loss of heterozygosity on chromosome 17 in tumours from Li-Fraumeni patients carrying a mutation to the TP53 gene. Oncogene 14: 865-871.
4. Kersemaekers, A.M., et al. 1998. Loss of heterozygosity for defined regions on chromosomes 3, 11 and 17 in carcinomas of the uterine cervix. Br. J. Cancer 77: 192-200.
5. Soussi, T., et al. 2000. p53 website and analysis of p53 gene mutations in human cancer: forging a link between epidemiology and carcinogenesis. Hum. Mutat. 15: 105-113.
6. Piura, B., et al. 2001. Three primary malignancies related to BRCA mutation successively occurring in a BRCA1 185delAG mutation carrier. Eur. J. Obstet. Gynecol. Reprod. Biol. 97: 241-244.

CHROMOSOMAL LOCATION

Genetic locus: PLD6 (human) mapping to 17p11.2; Pld6 (mouse) mapping to 11 B1.3.

SOURCE

PLD6 (G-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of PLD6 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-243817 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

PLD6 (G-16) is recommended for detection of PLD6 of mouse, rat and 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).

PLD6 (G-16) is also recommended for detection of PLD6 in additional species, including canine and bovine.

Suitable for use as control antibody for PLD6 siRNA (h): sc-93913, PLD6 siRNA (m): sc-140325, PLD6 shRNA Plasmid (h): sc-93913-SH, PLD6 shRNA Plasmid (m): sc-140325-SH, PLD6 shRNA (h) Lentiviral Particles: sc-93913-V and PLD6 shRNA (m) Lentiviral Particles: sc-140325-V.

Molecular Weight of PLD6: 28 kDa.

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.

STORAGE

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

PROTOCOLS

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