SANTA CRUZ BIOTECHNOLOGY, INC.

BCLP (A-14): sc-137312

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

BCLP (β-casein-like protein), also known as TMEM54 (transmembrane protein 54) or Protein CAC-1, is a 222 amino acid multi-pass membrane protein that is ubiquitously expressed in cancer cell lines. Introduction of BCLP cDNA into L929 cells results in a down-regulation of cell growth rate, a significant increase in cell area and a decrease in cell attachment. This evidence suggests that BCLP is assoicated with regulation of tumor growth patterns and cellular morphology. Expression of BCLP mRNA seems to be associated with recurrence of uterine cancer in women who have already been diagnosed. The gene encoding BCLP maps to human chromosome 1, which spans about 260 million base pairs and makes up 8% of the human genome. There are three isoforms of BCLP that are produced as a result of alternative splicing events.

REFERENCES

1. Suzuki, T., et al. 1998. Cloning and characterization of a cDNA fragment coding β-casein-like protein preferentially expressed in cervical adenocarcinoma cell line CAC-1. Cancer Lett. 124: 165-171.
2. Baba, T., et al. 2001. Specific detection of circulating tumor cells by reverse transcriptase-polymerase chain reaction of a β-casein-like protein, preferentially expressed in malignant neoplasms. Anticancer Res. 21: 2547-2551.
3. Baba, T., et al. 2001. Cloning and characterization of a tumor-associated antigen, β-casein-like protein. Biochem. Biophys. Res. Commun. 284: 340-345.
4. Schutte, B.C., et al. 2001. Report and abstracts of the sixth international workshop on human chromosome 1 mapping 2000. Cytogenet. Cell Genet. 92: 23-41.
5. Murphy, W.J., et al. 2003. The origin of human chromosome 1 and its homologs in placental mammals. Genome Res. 13: 1880-1888.
6. Gerhard, D.S., et al. 2004. The status, quality, and expansion of the NIH full-length cDNA project: the Mammalian Gene Collection (MGC). Genome Res. 14: 2121-2127.

CHROMOSOMAL LOCATION

Genetic locus: TMEM54 (human) mapping to 1p35.1.

SOURCE

BCLP (A-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of BCLP 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-137312 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

BCLP (A-14) is recommended for detection of BCLP isoforms 1-3 of human and rat 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).

BCLP (A-14) is also recommended for detection of BCLP isoforms 1-3 in additional species, including equine, canine and porcine.

Suitable for use as control antibody for BCLP siRNA (h): sc-88375, BCLP shRNA Plasmid (h): sc-88375-SH and BCLP shRNA (h) Lentiviral Particles: sc-88375-V.

Molecular Weight of BCLP: 24 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.

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.