SANTA CRUZ BIOTECHNOLOGY, INC.

Ameloblastin (R-16): sc-33104

BACKGROUND

Dental enamel is a highly mineralized tissue with most of its volume occupied by large, highly organized, hydroxyapatite crystals. This structure is thought to be controlled through the interaction of many organic matrix molecules including amelogenin, ameloblastin, enamelin, tuftelin and several other enzymes. All of these secreted proteins are involved in the mineralization and enamel matrix formation in developing tooth enamel. Ameloblastin (AMBN), which localizes to the extracellular matrix, is an ameloblast-specific protein. It is detected in the sheath space between rod-interrod enamel and at the Tomes processes of secretory ameloblasts. Defects in the gene encoding for ameloblastin, AMBN, can be seen in patients with ameloblastomas.

REFERENCES

1. MacDougall, M., et al. 2000. Cloning, characterization and immunolocalization of human ameloblastin. Eur. J. Oral. Sci. 108: 303-310.
2. Toyosawa, S., et al. 2000. Cloning and characterization of the human ameloblastin gene. Gene 256: 1-11.
3. Mardh, C.K., et al. 2001. Human ameloblastin gene: genomic organization and mutation analysis in amelogenesis imperfecta patients. Eur. J. Oral. Sci. 109: 8-13.
4. Shintani, S., et al. 2005. Expression of ameloblastin during enamel formation in a crocodile. Enamel formation, as well as adhesion between ameloblasts and the enamel J. Exp. Zoolog. B. Mol. Dev. Evol. Epublished ahead of print.
5. Torres-Quintana, M.A., et al. 2005. Ameloblastin and amelogenin expression in posnatal developing mouse molars. J. Oral. Sci. 47: 27-34.
6. Wang, H., et al. 2005. Enamel matrix protein interactions. J. Bone Miner. Res. 20: 1032-1040.

CHROMOSOMAL LOCATION

Genetic locus: AMBN (human) mapping to 4q21; Ambn (mouse) mapping to 5 E1.

SOURCE

Ameloblastin (R-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of Ameloblastin of rat 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-33104 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.

RESEARCH USE

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

APPLICATIONS

Ameloblastin (R-16) is recommended for detection of Ameloblastin of mouse 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).

Suitable for use as control antibody for Ameloblastin siRNA (m): sc-44946.

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.

PROTOCOLS

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