SANTA CRUZ BIOTECHNOLOGY, INC.

Tuftelin (m): 293T Lysate: sc-124366

BACKGROUND

Dental enamel is a highly mineralized tissue in which most of the volume is 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 and Tuftelin. All of these secreted proteins are involved in the mineralization and enamel matrix formation in developing tooth enamel. Tuftelin is also expressed in normal and cancerous non-mineralizing soft tissues, which suggests it has a universal function and/or a multifunctional role. The Tuftelin protein contains one N-glycosylation site, seven O-glycosylation sites and seven phosphorylation sites. It also contains a coiled-coil domain that is involved in self-assembly and the interaction of Tuftelin with the Tuftelin interacting protein TIP39.

REFERENCES

1. Paine, M.L., et al. 1997. Carboxyl-region of Tuftelin mediates self-assembly. Connect. Tissue Res. 35: 157-161.
2. Deutsch, D., et al. 1997. Tuftelin: enamel mineralization and amelogenesis imperfecta. Ciba Found. Symp. 205: 135-147.
3. MacDougall, M., et al. 1998. Cloning, characterization, and tissue expression pattern of mouse Tuftelin cDNA. J. Dent. Res. 77: 1970-1978.
4. Deutsch, D., et al. 1998. Tuftelin—aspects of protein and gene structure. Eur. J. Oral Sci. 106 Suppl. 1: 315-323.
5. Mao, Z., et al. 2001. The human Tuftelin gene: cloning and characterization. Gene 279: 181-196.
6. Deutsch, D., et al. 2002. The human Tuftelin gene and the expression of Tuftelin in mineralizing and nonmineralizing tissues. Connect. Tissue Res. 43: 425-434.

CHROMOSOMAL LOCATION

Genetic locus: Tuft1 (mouse) mapping to 3 F2.1.

PRODUCT

Tuftelin (m): 293T Lysate represents a lysate of mouse Tuftelin transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

APPLICATIONS

Tuftelin (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive Tuftelin antibodies. Recommended use: 10-20 µl per lane.

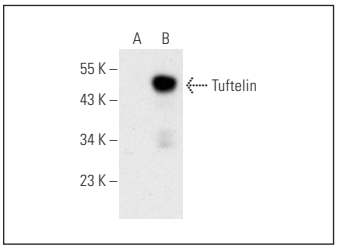
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

Tuftelin (G-11): sc-365632 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse Tuftelin expression in Tuftelin transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

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 Luminol Reagent: sc-2048.

DATA



Tuftelin (G-11): sc-365632. Western blot analysis of Tuftelin expression in non-transfected: sc-117752 (**A**) and mouse Tuftelin transfected: sc-124366 (**B**) 293T whole cell lysates.

RESEARCH USE

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

PROTOCOLS

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