

Tuftelin (G-11): sc-365632

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

- Paine, M.L., et al. 1996. Carboxyl-region of Tuftelin mediates self-assembly. *Connect. Tissue Res.* 35: 157-161.
- Deutsch, D., et al. 1997. Tuftelin: enamel mineralization and amelogenesis imperfecta. *Ciba Found. Symp.* 205: 135-147.
- Deutsch, D., et al. 1998. Tuftelin—aspects of protein and gene structure. *Eur. J. Oral Sci.* 106: 315-323.
- MacDougall, M., et al. 1998. Cloning, characterization, and tissue expression pattern of mouse Tuftelin cDNA. *J. Dent. Res.* 77: 1970-1978.
- Mao, Z., et al. 2001. The human Tuftelin gene: cloning and characterization. *Gene* 279: 181-196.
- 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 (human) mapping to 1q21.3; Tuft1 (mouse) mapping to 3 F2.1.

SOURCE

Tuftelin (G-11) is a mouse monoclonal antibody raised against amino acids 190-292 mapping within an internal region of Tuftelin of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Tuftelin (G-11) is available conjugated to agarose (sc-365632 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-365632 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365632 PE), fluorescein (sc-365632 FITC), Alexa Fluor® 488 (sc-365632 AF488), Alexa Fluor® 546 (sc-365632 AF546), Alexa Fluor® 594 (sc-365632 AF594) or Alexa Fluor® 647 (sc-365632 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-365632 AF680) or Alexa Fluor® 790 (sc-365632 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

Tuftelin (G-11) is recommended for detection of Tuftelin of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], 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 Tuftelin siRNA (h): sc-61736, Tuftelin siRNA (m): sc-61737, Tuftelin shRNA Plasmid (h): sc-61736-SH, Tuftelin shRNA Plasmid (m): sc-61737-SH, Tuftelin shRNA (h) Lentiviral Particles: sc-61736-V and Tuftelin shRNA (m) Lentiviral Particles: sc-61737-V.

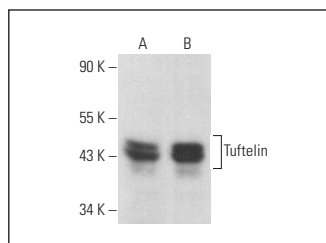
Molecular Weight of Tuftelin: 44 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, HEK293 whole cell lysate: sc-45136 or Tuftelin (m): 293T Lysate: sc-124366.

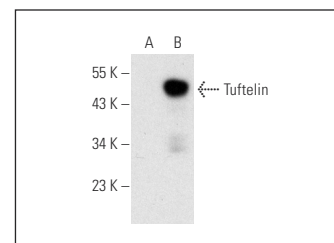
RECOMMENDED SUPPORT REAGENTS

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. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



Tuftelin (G-11): sc-365632. Western blot analysis of Tuftelin expression in HeLa (A) and HEK293 (B) whole cell lysates.



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.

SELECT PRODUCT CITATIONS

- Zhou, B., et al. 2022. LINC00960 regulates cell proliferation and glycolysis in pancreatic cancer through the miR-326-3p/TUFT1/AKT-mTOR axis. *Kaohsiung J. Med. Sci.* E-published.

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.