

# Tuftelin (H-103): sc-135247

## 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. Deutsch, D., Dafni, L., Palmon, A., Hekmati, M., Young, M.F. and Fisher, L.W. 1997. Tuftelin: enamel mineralization and amelogenesis imperfecta. Ciba Found. Symp. 205: 135-147.
2. Paine, M.L., Deutsch, D. and Snead, M.L. 1997. Carboxyl-region of tuftelin mediates self-assembly. Connect. Tissue Res. 35: 157-161.

## CHROMOSOMAL LOCATION

Genetic locus: TUFT1 (human) mapping to 1q21.3; Tuft1 (mouse) mapping to 3 F2.1.

## SOURCE

Tuftelin (H-103) is a rabbit polyclonal antibody raised against amino acids 190-292 mapping within an internal region of Tuftelin 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.

## APPLICATIONS

Tuftelin (H-103) is recommended for detection of Tuftelin of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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).

Tuftelin (H-103) is also recommended for detection of Tuftelin in additional species, including equine, canine, bovine and porcine.

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.

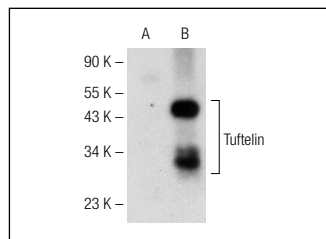
Molecular Weight of Tuftelin: 44 kDa.

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

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



Tuftelin (H-103): sc-135247. Western blot analysis of Tuftelin expression in non-transfected: sc-117752 (A) and mouse Tuftelin transfected: sc-124366 (B) 293T whole cell lysates.

## 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.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.


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Try **Tuftelin (G-11): sc-365632**, our highly recommended monoclonal alternative to Tuftelin (H-103).