

TUFT1 Antibody / Tuftelin Antibody (FY13547)

Catalog No.	Formulation	Size
FY13547	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

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Species Reactivity	Human
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit Ig
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na ₂ HPO ₄ .
UniProt	Q9NNX1
Applications	Western Blot : 0.5-1ug/ml ELISA : 0.1-0.5 ug/ml
Limitations	For research use only, this TUFT1 Antibody / Tuftelin Antibody is not intended for diagnostic or therapeutic use.

TUFT1 Antibody by WB in human cell lines. Western blot analysis using Tuftelin Antibody detects a prominent band near 44 kDa, consistent with the calculated molecular weight of TUFT1. Lanes 1-3 contain HeLa, SiHa and RT4 whole-cell lysates, respectively. Each lane was loaded with 30 ug reduced protein, separated by 10% SDS-PAGE and transferred to nitrocellulose. The membrane was blocked with 5% nonfat milk and incubated with 0.5 ug/mL primary antibody overnight at 4oC. Bound antibody was detected with an HRP-conjugated anti-rabbit secondary antibody and chemiluminescent substrate. The target-associated band is present in all three human cell-line samples.

Description

TUFT1 Antibody / Tuftelin Antibody detects TUFT1, a protein originally described in connection with tooth development and mineralizing tissues. Early work associated tuftelin with the formation of dental enamel and with processes occurring near the developing enamel matrix. Enamel formation requires precise coordination among extracellular matrix proteins, ion transport, and the activity of specialized epithelial cells. TUFT1 became of interest because its expression and localization suggested a relationship to this complex developmental environment. Its precise molecular function, however, has remained less clearly established than that of major enamel matrix proteins such as amelogenin.

Tuftelin is not restricted conceptually to enamel biology. Subsequent studies have investigated its expression in other

tissues and its possible relationships to cellular stress responses, signaling, and differentiation. Reported associations with intracellular pathways need to be interpreted in light of the particular experimental model, since a direct biochemical mechanism has not been established for every proposed role. The protein has also been discussed in the context of calcium-related cellular processes and the response of cells to environmental changes. These observations have broadened interest in TUFT1 beyond the original developmental setting without resolving all aspects of its function.

Investigations of TUFT1 illustrate the challenge of assigning a single definitive activity to a protein first recognized through a distinctive expression pattern. Its contribution may depend on developmental timing, cell type, and interactions that have yet to be fully characterized. Altered TUFT1 expression has been reported in some disease-associated settings, but expression correlations alone do not demonstrate a causal role. Continued characterization of tuftelin is relevant to understanding mineralized tissue development and broader cellular regulation. NSJ Bioreagents includes this target in its antibody catalog. A TUFT1 Antibody relates to studies of tuftelin biology, developmental protein expression, and the molecular events associated with tissue differentiation.

Explore related research targets in our [Cell Biology Antibodies](#) collection.

Application Notes

Optimal working dilutions for the TUFT1 Antibody / Tuftelin Antibody should be established experimentally for each assay.

Immunogen

The TUFT1 Antibody was generated using e. coli-derived human TUFT1 recombinant protein (amino acids T9-E339).

Storage

After reconstitution, keep the TUFT1 Antibody at 4oC for up to one month. Alternatively, store aliquots at -20oC for up to six months. Avoid multiple freezing and thawing cycles.

Alternate Names

TUFT1 antibody, Tuftelin antibody, tuftelin 1 antibody, TUFT1 rabbit polyclonal antibody