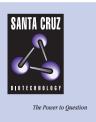
SANTA CRUZ BIOTECHNOLOGY, INC.

Lipocalin-1 (R-16): sc-34681



BACKGROUND

Lipocalin-1 is a secretory protein that is highly expressed in fluids covering epithelial surfaces such as tears and respiratory secretions. This major lipidbinding protein in tears is also called tear lipocalin (TL) and von Ebner's gland protein (VEG), as it is also a major secretion of these lingual salivary glands. In addition to lacrimal glands and lingual glands, Lipocalin-1 is secreted by nasal mucosal glands, secretory glands of the tracheobronchial tract, sweat glands, mammary glands, adrenal gland, prostate, thymus, testis and corticotrophs of the pituitary gland. Specifically, Lipocalin-1 functions to stabilize the lipid film of human tear fluid by removing harmful lipids from the human corneal surface and delivering them to the aqueous phase of tears. Lipocalin-1 may also function as a transporter of hydrophobic molecules such as bitter substances on the tongue.

REFERENCES

- 1. Schmale, H., et al. 1990. Possible role for salivary gland protein in taste reception indicated by homology to lipophilic-ligand carrier proteins. Nature 343: 366-369.
- Blaker, M., et al. 1993. Molecular cloning of human von Ebner's gland protein, a member of the lipocalin superfamily highly expressed in lingual salivary glands. Biochim. Biophys. Acta 1172: 131-137.
- Kock, K., et al. 1994. Denatonium bitter tasting among transgenic mice expressing rat von Ebner's gland protein. Physiol. Behav. 56: 1173-1177.
- 4. Schenkels, L.C., et al. 1995. EP-GP and the lipocalin VEGh, two different human salivary 20 kDa proteins. J. Dent. Res. 74: 1543-1550.
- Wojnar, P., et al. 2001. Molecular cloning of a novel Lipocalin-1 interacting human cell membrane receptor using phage display. J. Biol. Chem. 276: 20206-20212.
- Fluckinger, M., et al. 2004. Human tear lipocalin exhibits antimicrobial activity by scavenging microbial siderophores. Antimicrob. Agents Chemother. 48: 3367-3372.
- Azzarolo, A.M., et al. 2004. Presence of tear lipocalin and other major proteins in lacrimal fluid of rabbits. Comp. Biochem. Physiol. B, Biochem. Mol. Biol. 138: 111-117.
- Gasymov, O.K., et al. 2005. Tear Lipocalin: evidence for a scavenging function to remove lipids from the human corneal surface. Invest. Ophthalmol. Vis. Sci. 46: 3589-3596.
- 9. Breustedt, D.A., et al. 2005. The 1.8-A crystal structure of human tear Lipocalin reveals an extended branched cavity with capacity for multiple ligands. J. Biol. Chem. 280: 484-493.

CHROMOSOMAL LOCATION

Genetic locus: LCN1 (human) mapping to 9q34.

SOURCE

Lipocalin-1 (R-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of Lipocalin-1 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-34681 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Lipocalin-1 (R-16) is recommended for detection of Lipocalin-1 of 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).

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) Immunofluores-cence: 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.

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 or our catalog for detailed protocols and support products.