

Lipocalin-1 (H-8): sc-374620

BACKGROUND

Lipocalin-1 is a secretory protein that is highly expressed in fluids covering epithelial surfaces such as tears and respiratory secretions. This major lipid-binding 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

- 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.
- 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.

CHROMOSOMAL LOCATION

Genetic locus: LCN1 (human) mapping to 9q34.3.

SOURCE

Lipocalin-1 (H-8) is a mouse monoclonal antibody raised against amino acids 41-85 mapping within an internal region of Lipocalin-1 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Lipocalin-1 (H-8) is available conjugated to agarose (sc-374620 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-374620 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-374620 PE), fluorescein (sc-374620 FITC), Alexa Fluor® 488 (sc-374620 AF488), Alexa Fluor® 546 (sc-374620 AF546), Alexa Fluor® 594 (sc-374620 AF594) or Alexa Fluor® 647 (sc-374620 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-374620 AF680) or Alexa Fluor® 790 (sc-374620 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA

APPLICATIONS

Lipocalin-1 (H-8) is recommended for detection of Lipocalin-1 of 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 Lipocalin-1 siRNA (h): sc-45477, Lipocalin-1 shRNA Plasmid (h): sc-45477-SH and Lipocalin-1 shRNA (h) Lentiviral Particles: sc-45477-V.

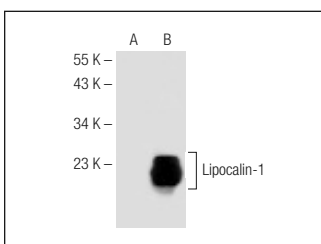
Molecular Weight of Lipocalin-1: 20 kDa.

Positive Controls: human Lipocalin-1 transfected HEK293T whole cell lysate.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BPHRP: sc-516102 or m-IgGκ BPHRP (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 BPFITC: sc-516140 or m-IgGκ BPE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



Lipocalin-1 (H-8): sc-374620. Western blot analysis of Lipocalin-1 expression in non-transfected (A) and human Lipocalin-1 transfected (B) HEK293T whole cell lysates.

SELECT PRODUCT CITATIONS

- Rehorek, S.J., et al. 2020. Whale tear glands in the bowhead and the beluga whales: source and function. *J. Morphol.* 281: 316-325.
- Bannier-Hélaouët, M., et al. 2021. Exploring the human lacrimal gland using organoids and single-cell sequencing. *Cell Stem Cell* 28: 1221-1232.e7.

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.