

Recombinant Human Lipocalin-1/LCN1 Protein

Catalog No.: RP01533

Sequence Information

Species **Gene ID**
Human 3933

Swiss Prot **Tags**
P31025 C-His

Synonyms

LCN1, PMFA, TLC, TP, VEGP

Product Information

Source **Purification**
HEK293 cells ≥ 95 % as
 determined by
 SDS-PAGE.

Calculated MWObserved MW
18.28 kDa 18–20 kDa

Endotoxin

< 0.1 EU/μg of the protein by LAL method.

Formulation

Lyophilized from a 0.22 μm filtered solution of PBS, pH 7.4.

Reconstitution

Centrifuge the vial before opening. Reconstitute to a concentration of 0.1–0.5 mg/mL in sterile distilled water. Avoid vortex or vigorously pipetting the protein. For long term storage, it is recommended to add a carrier protein or stabilizer (e.g. 0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose), and aliquot the reconstituted protein solution to minimize free-thaw cycles.

Background

Lipocalin-1, also known as Von Ebner gland protein, VEG protein, Tear Prealbumin, VEGP, Tear lipocalin, and LCN1 is a secreted protein that belongs to the calycin superfamily and Lipocalin family. Human Lipocalin-1 / VEGP was originally described as a major protein of human tear fluid, which was thought to be tear specific. Lipocalin-1 / VEGP is identical to lingual von Ebner's gland protein and is also produced in the prostate, nasal mucosa, and tracheal mucosa. Homologous proteins have been found in the rat, pig, and probably dog and horse. Lipocalin-1 / VEGP is an unusual lipocalin member, because of its high promiscuity for relative insoluble lipids and binding characteristics that differ from other members. Lipocalin-1 / VEGP acts as the principal lipid-binding protein in tear fluid, a more general physiological function has to be proposed due to its wide distribution and properties. Lipocalin-1 / VEGP would be ideally suited for scavenging of lipophilic, potentially harmful substances and thus might act as a general protection factor of epithelia. Lipocalin-1 / LCN1 could play a role in taste reception. It could be necessary for the concentration and delivery of sapid molecules in the gustatory system. Lipocalin-1 / LCN1 can bind various ligands, with chemical structures ranging from lipids and retinoids to the macrocyclic antibiotic rifampicin and even to microbial siderophores. It exhibits an extremely wide ligand pocket.

Basic Information

Description

Recombinant Human Lipocalin-1/LCN1 Protein is produced by HEK293 cells expression system. The target protein is expressed with sequence (His19–Asp176) of human Lipocalin-1/LCN1 (Accession #NP_002288.1) fused with a 6×His tag at the C-terminus.

Activity

Measured by its ability to inhibit active Cathepsin V cleavage of a fluorogenic peptide substrate Z-LR-AMC. The IC50 value is <2.94 nM.

Shipping

Lyophilized proteins are shipped at ambient temperature.
Liquid proteins are shipped at frozen temperature with dry ice.
Upon receipt, store it immediately at the temperature recommended below.

Storage

Store at –20°C

Operational Notes

For your safety and health, please wear a lab coat and disposable gloves for handling.

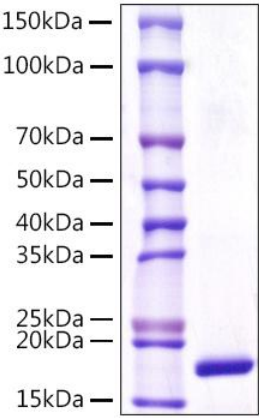
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Validation Data



Recombinant Human Lipocalin-1/LCN1 Protein was determined by SDS-PAGE under reducing conditions with Coomassie Blue.