Data Sheet (Cat.No.TMPY-01679)

TargetMol

LCN1 Protein, Human, Recombinant (His)

General Information

Synonyms:	TLC;MGC71975;TP;VEGP;Lipocalin 1;PMFA
Protein Construction:	A DNA sequence encoding the human LCN1 (NP_002288.1) extracellular domain (Met 1-Asp176) was fused with a polyhistidine tag at the C-terminus. Predicted N terminal: His 19
Species:	Human
Expression Host:	HEK293 Cells
Accession:	P31025
Molecular Weight:	19 kDa (predicted); 20 kDa (reducing conditions)

QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 95 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein 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.

Reference

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