Rhesus Layilin / LAYN Protein (His Tag)

Catalog Number: **90160-C08H**

Sino Biological Inc.
Biological Solution Specialist

General Information

Gene Name Synonym:

E030012M19Rik; Gm511

Protein Construction:

A DNA sequence encoding the rhesus LAYN (XP_001105766.1) (Met1-Glu220) was expressed with a polyhistidine tag at the C-terminus.

Source: Rhesus

Expression Host: Human Cells

QC Testing

Purity: > 95 % as determined by SDS-PAGE

Endotoxin:

< 1.0 EU per μg of the protein as determined by the LAL method

Stability:

Samples are stable for up to twelve months from date of receipt at -70 ℃

Predicted N terminal: Ala 22

Molecular Mass:

The recombinant cynomolgus LAYN comprises 210 amino acids and has a calculated molecular mass of 24.2 KDa. The apparent molecular mass of it is approximately 33-36 KDa respectively in SDS-PAGE.

Formulation:

Lyophilized from sterile PBS, pH 7.4

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

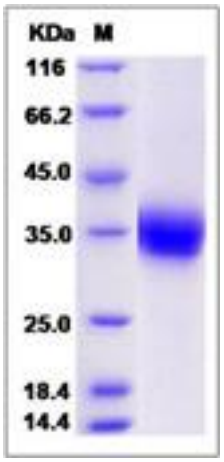
Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

Layilin, a recently characterized as a 55 kDa transmembrane protein with homology to C-type lectins, is present in numerous cell lines and tissue extracts. As one of the adaptor proteins, talin mediates the interactions between the actin filaments and the cell membrane by binding to integral membrane proteins and to the cytoskeleton. Layilin is a newly identified membrane-binding site for talin in peripheral ruffles of spreading cells, a ten-amino acid motif in the layilin cytoplasmic domain is sufficient for talin binding, and its adjacent LH2-LH3 tandem arrays in the cytoplasmic domain provide docking sites for talin. Furthermore, talin binds layilin, PIPK1gamma and integrins in similar although subtly different ways. Layilin binds specifically to hyaluronan (HA) through its extracellular domain, a ubiquitous extracellular matrix component in most animal tissues and body fluids, but not to other tested glycosaminoglycans. The research suggests that layilin may mediate signals from extracellular matrix to the cell cytoskeleton via interaction with different intracellular binding partners and thereby be involved in the modulation of cortical structures in the cell. All the above actions reveal an interesting parallel between layilin and the known HA receptor CD44. In addition, merlin and radixin have been identified as different intracellular binding partners of layilin. Accordingly, it has been suggested that layilin plays roles in a variety of cellular processes, including cell shape, adhesion, motility, and homeostasis, as well as signal transduction. In addition, layilin might play an important role in the process of invasion and lymphatic metastasis of lung carcinoma.

References

1.Borowsky ML, *et al.* (1998) Layilin, a novel talin-binding transmembrane protein homologous with C-type lectins, is localized in membrane ruffles.J Cell Biol. 143(2):429-42.
2.Bono P, *et al.* (2001) Layilin, a novel integral membrane protein, is a hyaluronan receptor. Mol Biol Cell. 12(4)891-900.
3.Bono P, *et al.* (2005) Layilin, a cell surface hyaluronan receptor, interacts with merlin and radixin. Exp Cell Res. 308(1):177-87.