

Human CALML3 Protein (His Tag)

Catalog Number: 12480-H07E



Sino Biological Inc.
Biological Solution Specialist

General Information

Gene Name Synonym:

CLP; 2310068O22Rik; AI326174

Protein Construction:

A DNA sequence encoding the human CALML3 (P27482) (Met 1-Lys 149) was expressed, with a polyhistidine tag at the N-terminus.

Source: Human

Expression Host: E. coli

QC Testing

Purity: > 95 % as determined by SDS-PAGE

Endotoxin:

Please contact us for more information.

Stability:

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

Predicted N terminal: Met

Molecular Mass:

The recombinant human CALML3 consisting of 164 amino acids and has a calculated molecular mass of 18.7KDa. It migrates as an 16 kDa band in SDS-PAGE under reducing conditions.

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:

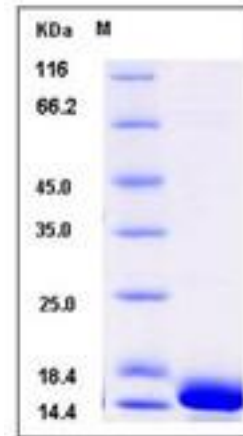
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

Calmodulin-like protein 3 (CALML3) is similar to that of authentic calmodulin and may actually compete with calmodulin by binding, with different affinity, to cellular substrates. Calmodulin-like protein 3 (CALML3) is a tumor-sensitive protein specifically expressed in normal epithelial cells but downregulated in tumorigenesis. Downregulation of the protein is an early event in breast cancer development. One of the most pressing questions raised by the discovery of CLP/CALML3 is that of its potential targets. Although it is 85% identical to human calmodulin, the distinct properties of CLP suggest that it has specific targets or targets that only partially overlap with those of calmodulin. Research has identified the unconventional myosin-10 (Myo10) as a specific target of CALML3. The discovery of Myo10 as a specific target of CALML3 is highly significant and suggests multiple lines of further research such as investigations of the Ca²⁺ regulation of Myo10 and the role of the loss of CLP in epithelial differentiation, adhesion, and cancer. Cells expressing CALML3 displayed a striking increase in the number and length of myosin-10-positive filopodia and showed increased mobility in a wound healing assay.

References

1. Bennett RD, *et al.* (2007) Calmodulin-like protein increases filopodia-dependent cell motility via up-regulation of myosin-10. *J Biol Chem.* 282(5): 3205-12.
2. Perochon A, *et al.* (2011) Calmodulin and calmodulin-like proteins in plant calcium signaling. *Biochimie.* 93(12): 2048-53.
3. Chinpongpanich A, *et al.* (2011) Biophysical characterization of calmodulin and calmodulin-like proteins from rice, *Oryza sativa* L. *Acta Biochim Biophys Sin (Shanghai).* 43(11): 867-76.

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