Human CAMK4 / CaMKIV Protein (GST Tag)

Catalog Number: **10664-H09B**

Sino Biological
Biological Solution Specialist

General Information

Gene Name Synonym:

caMK; CaMK-GR; CaMKIV; IV

Protein Construction:

A DNA sequence encoding the human CAMK4 (NP_001735.1) (Met 1-Tyr 473) was fused with the GST tag at the N-terminus.

Source: Human

Expression Host: Baculovirus-Insect Cells

QC Testing

Purity: > 82 % as determined by SDS-PAGE

Bio Activity:

No Kinase Activity

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: Met

Molecular Mass:

The recombinant human CAMK4/GST chimera consists of 697 amino acids and has a predicted molecular mass of 79 kDa. It migrates as an approximately 100 kDa band in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile 50mM Tris, 100mM NaCl, 0.5mM PMSF, pH 8.0

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:

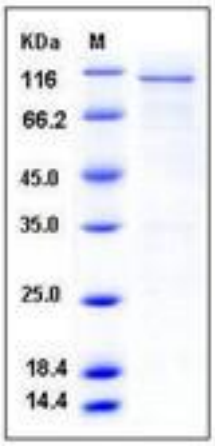
Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

Ca2+/ calmodulin-dependent protein kinase 4 (CAMKⅣ) belongs to the serine/threonine protein kinase family, and to the Ca2+/calmodulin-dependent protein kinase subfamily which is widely recognized as an essential enzyme implicated in the phophoinositide amplification cascade. Ca2+/calmodulin dependent protein kinase (CAMK) can be activated by the introcellular increased Ca2+ and then apt to combine with the target protein. Ca2+/ calmodulin-dependent protein kinase 4 (CAMKⅣ) is a multifunctional CaM-dependent kinase protein with limited tissue distribution, that has been implicated in transcriptional regulation in lymphocytes, neurons and male germ cells. All of the isforms of this family, including myosin light chain kinase, phosphorylase kinase, CaMK1, CaMKⅢ and CaMKⅣ have EF-hand structure.

References

1.Feliciano DM, *et al.* (2009) Repression of Ca^{2+}/calmodulin-dependent protein kinase IV signaling accelerates retinoic acid-induced differentiation of human neuroblastoma cells. J Biol Chem. 284 (39): 26466-81. 2.Zhao X, *et al.* (2001). The modular nature of histone deacetylase HDAC4 confers phosphorylation-dependent intracellular trafficking. J Biol Chem. 276 (37): 35042-8. 3.Racioppi L, *et al.* (2008) Calcium/calmodulin-dependent kinase IV in immune and inflammatory responses: novel routes for an ancient traveller.