
Recombinant Human CAMK1G / CLICK III / CaMKIgamma Protein (His & GST tag)**Cat.NO.: TP08351**

3th Edition

Synonyms:CLICK3;CLICKIII;dJ272L16.1;RP1-272L16.2;VWS1

Description: Calmodulin-Dependent Protein Kinase (CaM Kinase) is a kind of protein phosphorylate multiple downstream targets. Concentration of cytosolic calcium functions as a second messenger that mediates a wide range of cellular responses. Calcium binds to calcium binding proteins (calmodulin/CaM) and stimulates the activity of a variety of enzymes, including CaM kinases referred to as CaM-kinases (CaMKs), such as CaMKI, CaMKII, CaMKIV and CaMKK. Calmodulin-dependent protein kinase CL3/CaMKI γ is a membrane-anchored CaMK belonging to the CaM kinase family. Its C-terminal region is uniquely modified by two sequential lipidification steps: prenylation followed by a kinase-activity-regulated palmitoylation. These modifications are essential for CaMKI γ membrane anchoring and targeting into detergent-resistant lipid microdomains in the dendrites. It has been found that CaMKI γ critically contributed to BDNF-stimulated dendritic growth. Raft insertion of CaMKI γ specifically promoted dendritogenesis of cortical neurons by acting upstream of RacGEF STEF and Rac, both present in lipid rafts. Thus, CaMKI γ may represent a key element in the Ca²⁺-dependent and lipid-raft-delineated switch that turns on extrinsic activity-regulated dendrite formation in developing cortical neurons.

Form:PBS**Molecular Weight:**81 kDa**Sequences:**Met 1-Met 476**Purity:**> 95% by HPLC**Concentration:****Endotoxin Level:**<1.0 EU per 1 ug of protein (determined by LAL method)**Storage:**Can be stored at +4°C short term (1-2 weeks). For long term storage, aliquot and store at -20°C or -70°C. Avoid repeated freezing and thawing cycles.