Data Sheet (Cat.No.TMPY-04759)

TargetMol

CAMKIV Protein, Mouse, Recombinant

General Information

Synonyms:	D18Bwg0362e;CaMKIV;AI666733;A430110E23Rik;calcium/calmodulin-dependent protein kinase IV;CaMKIV/Gr
Protein Construction:	A DNA sequence encoding the mouse CAMK4(P08414) (Met1-Tyr469) was expressed and purified with two additional amino acids (Gly & Pro) at the N-terminus. Predicted N terminal: Gly
Species:	Mouse
Expression Host:	Baculovirus Insect Cells
Accession:	P08414
Molecular Weight:	52.7 kDa (predicted); 55 kDa (reducing conditions)

QC Testing

Biological Activity:	Kinase activity untested
Purity:	> 95 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Supplied as sterile 20 mM Tris, 500 mM NaCl, 10% glycerol, pH 7.4.

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 the product under sterile conditions at -20°C to -80°C. Samples are stable for up to 12 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

Proteins are shipped with blue ice.

Protein Background

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.

Reference

Feliciano DM, et al. (2009) Repression of Ca2+/calmodulin-dependent protein kinase IV signaling accelerates retinoic acid-induced differentiation of human neuroblastoma cells. J Biol Chem. 284 (39): 26466-81.
Zhao X, et al. (2001). The modular nature of histone deacetylase HDAC4 confers phosphorylation-dependent intracellular trafficking. J Biol Chem. 276 (37): 35042-8.
Racioppi L, et al. (2008) Calcium/calmodulin-dependent kinase IV in immune and inflammatory responses: novel routes for an ancient traveller.