

CAMKIV Protein, Human, Recombinant (GST)

General Information

Synonyms:	caMK;CaMK-GR;IV;CaMKIV;calcium/calmodulin-dependent protein kinase 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. Predicted N terminal: Met
Species:	Human
Expression Host:	Baculovirus Insect Cells
Accession:	Q16566
Molecular Weight:	79 kDa (predicted); 100 kDa (reducing conditions)

QC Testing

Biological Activity:	No Kinase Activity
Purity:	> 82 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing 50 mM Tris, 100 mM NaCl, 0.5 mM PMSF, pH 8.0. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

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 recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry 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 phosphoinositide amplification cascade. Ca²⁺/calmodulin dependent protein kinase (CAMK) can be activated by the intracellular 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 isoforms 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.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

This product is for Research Use Only · Not for Human or Veterinary or Therapeutic Use

Tel:781-999-4286 E_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481