

PRODUCT INFORMATION



Calmodulin-Dependent Protein Kinase II (290-309) (trifluoroacetate salt) Item No. 24318

Formal Name: L-leucyl-L-lysyl-L-lysyl-L-phenylalanyl-L-asparaginyl-L-alanyl-L-arginyl-L-arginyl-L-lysyl-L-leucyl-L-lysylglycyl-L-alanyl-L-isoleucyl-L-leucyl-L-threonyl-L-threonyl-L-methionyl-L-leucyl-L-alanine, trifluoroacetate salt
H—Leu—Lys—Lys—Phe—Asn—Ala—Arg—Arg—Lys—Leu—Lys—Gly—Ala—Ile—Leu—Thr—Thr—Met—Leu—Ala—OH
• XCF₃COOH

MF: C₁₀₃H₁₈₅N₃₁O₂₄S • XCF₃COOH

FW: 2,273.8

Purity: ≥95%

Supplied as: A lyophilized powder

Storage: -20°C

Stability: ≥4 years

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Calmodulin-dependent protein kinase II (290-309) (trifluoroacetate salt) is supplied as a lyophilized powder. A stock solution may be made by dissolving the calmodulin-dependent protein kinase II (290-309) (trifluoroacetate salt) in water. The solubility of calmodulin-dependent protein kinase II (290-309) (trifluoroacetate salt) in water is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Calmodulin-dependent protein kinase II (290-309) is a synthetic peptide derived from the rat brain protein sequence that contains the calmodulin binding domain.^{1,2} It inhibits calcium/calmodulin-dependent protein kinase II (CaMKII) with an IC₅₀ value of 52 nM and CaMKII-dependent phosphodiesterase activity (IC₅₀ = 1.1 nM). Calmodulin-dependent protein kinase II (290-309) has been used in the study of CaM binding, autophosphorylation, and dynamics.^{3,4}

References

1. Payne, E.M., Fong, Y.-L., Ono, T., *et al.* Calcium/Calmodulin-dependent Protein Kinase II. *J. Biol. Chem.* **263**(15), 7190-7195 (1988).
2. Lin, C.R., Kapiloff, M.S., Durgerian, S., *et al.* Molecular cloning of a brain-specific calcium/calmodulin-dependent protein kinase. *Proc. Natl. Acad. Sci. U.S.A.* **84**(16), 5962-5966 (1987).
3. Wyttenbach, T., Grabenauer, M., Thalassinou, K., *et al.* The effect of calcium ions and peptide ligands on the relative stabilities of the calmodulin dumbbell and compact structures. *J. Phys. Chem. B.* **114**(1), 437-447 (2010).
4. Colbran, R.J. and Soderling, T.R. Calcium/calmodulin-independent autophosphorylation sites of calcium/calmodulin-dependent protein kinase II. Studies on the effect of phosphorylation of threonine 305/306 and serine 314 on calmodulin binding using synthetic peptides. *J. Biol. Chem.* **265**(19), 11213-11219 (1990).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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