



Product Information

AUTOCAMTIDE-2

Product Number **A0591**

Storage Temperature -0°C

Product Description

Appearance: White powder

Molecular Weight: 1527.8

Molecular Formula: C₆₅H₁₁₈N₂₂O₂₀

Purity: >97% (HPLC)

NH₂-Lys-Lys-Ala-Leu-Arg-Arg-Gln-Glu-Thr-Val-Asp-Ala-Leu-OH. A highly selective synthetic Ca⁺²/calmodulin-dependent protein kinase substrate.^{1,2} The peptide contains the sequence around the autophosphorylation site in the autoinhibitory domain of calmodulin-dependent protein kinase II (CaM kinase II).

Autothiophosphorylated (at Thr286/Thr287) CaM kinase II and chymotryptic fragments of Cam kinase II lacking the autoinhibitory domain were found to be much more labile than the native enzyme. These forms of the enzyme have been shown to be stabilized by autocamtide-2. This suggests that the autoinhibitory domain of CaM kinase II plays an important role in

stabilizing the enzyme by binding to the substrate-binding site of the autophosphorylation site.³

Preparation Instructions

Autocamtide-2 is soluble in water at 1 mg/ml.

Storage/Stability

The powder should be stored desiccated below 0°C. Sigma has not performed solution stability studies on this material.

References

1. Hanson, P.I., Neuron, 3, 59-70 (1989).
2. Jones, P.M., and Persaud, S.J., Am. J. Physiol., 274 (4 Pt 1), E708-E715 (1998).
3. Ishida, A., and Fujisawa, H., J. Biol. Chem., 270, 2163-2170 (1995).

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