PRODUCT INFORMATION

Myr-ZIP

Item No. 34445

Formal Name: N-(1-oxotetradecyl)-L-seryl-L-isoleucyl-L-tyrosyl-L-arginyl-L-arginylglycyl-L-alanyl-L-arginyl-L-arginyl-L-tryptophyl-L-arginyl-L-lysyl-L-leucine, trifluoroacetate salt

Synonyms: Myristoylated Zeta-Pseudosubstrate Inhibitory Peptide , Myristoylated-ZIP, Myr-Ser-Ile-Tyr-Arg-Arg-Gly-Ala-Arg-Arg-Trp-Arg-Lys-Leu, Myr-SIYRRGARRWRKL-OH, Zeta Inhibitory Peptide

MF: $C_{90}H_{154}N_{30}O_{17} \bullet XCF_3COOH$

FW: 1,928.4

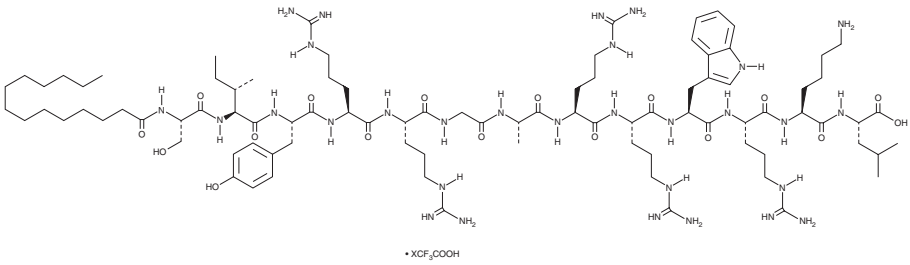
Purity: ≥95%

Supplied as: A solid

Storage: -20°C

Stability: ≥4 years

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



Laboratory Procedures

Myr-ZIP is supplied as a solid. A stock solution may be made by dissolving the myr-ZIP in water. The solubility of myr-ZIP in water is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Myr-ZIP is a cell-permeable inhibitor of the constitutively active protein kinase C (PKC) isoform PKMζ (K_i = 0.076-2.11 µM).[3,4] It also inhibits PKCα when used at a concentration of 10 µM.[1] Myr-ZIP (5 µM) prevents PKC translocation to the plasma membrane induced by ionomycin (Item Nos. 10004974 | 11932) in HEK293 cells expressing A-kinase anchor protein 79 (AKAP79). Myr-ZIP inhibits the conditioned place preference response to morphine in rats when administered intracranially into the nucleus accumbens core at doses of 10 and 30 nmol/0.5 µl per side.[2]

References

1. Bogard, A.S. and Tavalin, S.J. Protein kinase C (PKC)ζ pseudosubstrate inhibitor peptide promiscuously binds PKC family isoforms and disrupts conventional PKC targeting and translocation. *Mol. Pharmacol.* **88(4)**, 728-735 (2015).
2. Li, Y.-q., Xue, Y.-x., He, Y.-y., *et al.* Inhibition of PKMZ in nucleus accumbens core abolishes long-term drug reward memory. *J. Neurosci.* **31(14)**, 5436-5446 (2011).
3. Yao, Y., Shao, C., Jothianandan, D., *et al.* Matching biochemical and functional efficacies confirm ZIP as a potent competitive inhibitor of PKMζ in neurons. *Neuropharmacology* **64(1)**, 37-44 (2013).
4. Lee, A.M., Kanter, B.R., Wang, D., *et al.* Prkcz null mice show normal learning and memory. *Nature* **493(7432)**, 419-419 (2013).

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