

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: C₉₀H₁₅₄N₃₀O₁₇ • XCF₃COOH

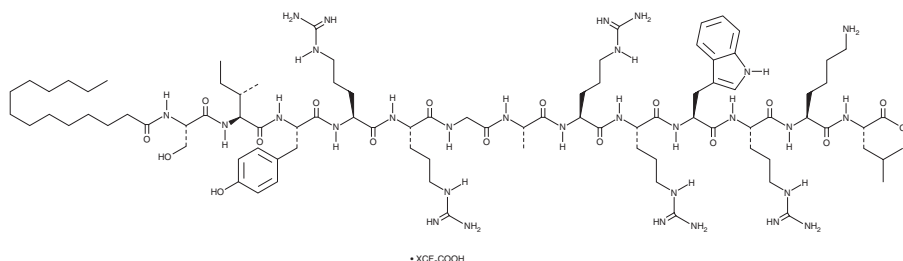
FW: 1,928.4

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 PKM ζ ($K_i = 0.076$ - $2.11 \mu\text{M}$).^{3,4} It also inhibits PKC α when used at a concentration of $10 \mu\text{M}$.¹ Myr-ZIP ($5 \mu\text{M}$) 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 PKM ζ 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 PKM ζ 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).

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.

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