PRODUCT INFORMATION

TIP39 (human, bovine) (trifluoroacetate salt)

Item No. 37452

Formal Name: L-seryl-L-leucyl-L-alanyl-L-leucyl-L-alanyl-L-α-aspartyl-L-α-aspartyl-L-alanyl-L-alanyl-L-phenylalanyl-L-arginyl-L-α-glutamyl-L-arginyl-L-alanyl-L-arginyl-L-leucyl-L-leucyl-L-alanyl-L-alanyl-L-leucyl-L-α-glutamyl-L-arginyl-L-arginyl-L-histidyl-L-tryptophyl-L-leucyl-L-asparaginyl-L-seryl-L-tyrosyl-L-methionyl-L-histidyl-L-lysyl-L-leucyl-L-leucyl-L-valyl-L-leucyl-L-α-aspartyl-L-alanyl-L-proline, trifluoroacetate salt

Synonym: Tuberoinfundibular Peptide of 39 Residues

Peptide Sequence: SLALADDAAFRERARLLAALERRHWLNSYMHKLLVLDAP-OH

MF: $C_{202}H_{325}N_{61}O_{54}S \bullet XCF_3COOH$

FW: 4,504.2

Purity: ≥98%

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

TIP39 (human, bovine) (trifluoroacetate salt) is supplied as a solid. A stock solution may be made by dissolving the TIP39 (human, bovine) (trifluoroacetate salt) in the solvent of choice, which should be purged with an inert gas. TIP39 (human, bovine) (trifluoroacetate salt) is soluble in a 20:80 solution of acetonitrile:water.

Description

TIP39 is a neuropeptide and parathyroid hormone receptor type 2 (PTH2R) agonist.[1] It induces cAMP accumulation in COS-7 cells expressing recombinant human or rat PTH2R (EC_{50}s = 0.5 and 0.8 nM, respectively) and F-11 cells that endogenously express PTH2R (EC_{50} = 1.15 nM). TIP39 (1 nM) induces cell cycle arrest at the G_0/G_1 phase and decreases expression of the master regulator of cartilage differentiation *Sox9* in CFK2 rat chondrocytes.[2] TIP39 (100 pmol/animal) decreases immobility time in the forced swim test in mice.[3]

References

1. Usdin, T.B., Hoare, S.R., Wang, T., *et al*. TIP39: A new neuropeptide and PTH2-receptor agonist from hypothalamus. *Nat. Neurosci.* **2(11)**, 941-943 (1999).
2. Panda, D., Goltzman, D., Jüppner, H., *et al*. TIP39/parathyroid hormone type 2 receptor signaling is a potent inhibitor of chondrocyte proliferation and differentiation. *Am. J. Physiol. Endocrinol. Metab.* **297(5)**, E1125-E1136 (2009).
3. LaBuda, C.J., Dobolyi, A., and Usdin, T.B. Tuberoinfundibular peptide of 39 residues produces anxiolytic and antidepressant actions. *Neuroreport* **15(5)**, 881-885 (2004).

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