

Product Data Sheet

Product Name: Osteocalcin (1-49) (human) (trifluoroacetate salt)

Cat. No.: GC44518

Chemical Properties

Cas. No. 136461-80-8

Formula C₂₆₉H₃₈₁N₆₇O₈₂S₂•XCF₃COOH M.Wt 5929.4

Solubility Formic Acid: 1 mg/ml Storage Store at -20°C

General For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the tips ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Evaluation sample solution : ship with blue ice All other available size: ship with RT, or Condition blue ice upon request.

Structure

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H-Tyr-Leu-Tyr-Gln-Trp-Leu-Gly-Ala-Pro-Val-
Pro-Tyr-Pro-Asp-Pro-Leu-Gla-Pro-Arg-Arg-
Gla-Val-Cys-Gla-Leu-Asn-Pro-Asp-Cys-Asp-
Glu-Leu-Ala-Asp-His-Ile-Gly-Phe-Gln-Glu-
Ala-Tyr-Arg-Arg-Phe-Tyr-Gly-Pro-Val-OH
• XCF3COOH
  
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Background

Osteocalcin (1-49) is a non-collagenous peptide that is secreted by osteoblasts and odontoblasts and comprises 1-2% of the total protein in bone. Secretion of osteocalcin (1-49) is stimulated by 1,25-dihydroxy vitamin D and plasma levels increase in diseases that induce dysregulated bone turnover such as osteoporosis, Paget's disease, and primary hyperparathyroidism. Osteocalcin (1-49) is positively correlated with insulin sensitivity and negatively correlated with high blood glucose levels in women. In vitro, osteocalcin induces chemotaxis of MDA-MB-231 breast cancer cells, human peripheral blood monocytes, and rat osteosarcoma cells with osteoblast-like characteristics. It is also expressed by vascular smooth muscle cells (VSMCs) displaying an osteoblast-like phenotype and has been positively associated with calcification of aortic tissue and heart valves in humans.

Caution: Product has not been fully validated for medical applications. For research use only.

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