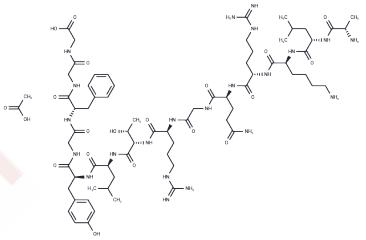
Data Sheet (Cat.No.TP1820L)

TargetMol

Osteogenic Growth Peptide, OGP acetate

Chemical Properties



CAS No. :

Formula: C70H114N22O20

Molecular Weight: 1583.82

Storage: Keep away from moisture
Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	Osteogenic Growth Peptide, OGP acetate is a short, naturally occurring 14-mer growth factor peptide found in serum at μM concentrations. Osteogenic growth peptide OGP is a key factor in the mechanism of the systemic osteogenic response to local bone marrow injury.
Targets(IC50)	Others
In vitro	Osteogenic Growth Peptide (OGP) regulates proliferation, differentiation, and matrix mineralization in osteoblast lineage cells. The active portion of OGP, the OGP(10-14) region, is cleaved from the peptide and binds to the OGP receptor which activates the MAP kinase, the Src, and the RhoA pathways[1]. Osteogenic Growth Peptide (OGP) is a native molecule with a primary structure identical to the C-terminus of histone H4, whose sequence contains a highly conserved 14-amino acid motif (NH2-ALKRQGRTLYGFGG-OH). This peptide is isolated from blood during osteogenic remodeling of post-ablation of marrow regeneration. The osteogenic growth peptide (OGP) and its C-terminal pentapeptide OGP(10-14) have been shown to stimulate the proliferation, differentiation, alkaline phosphatase activity and matrix mineralization of osteoblastic lineage cells[2].

Solubility Information

Solubility	DMSO: 5 mM,Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	0.6314 mL	3.1569 mL	6.3138 mL
5 mM	0.1263 mL	0.6314 mL	1.2628 mL
10 mM	0.0631 mL	0.3157 mL	0.6314 mL
50 mM	0.0126 mL	0.0631 mL	0.1263 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Moore NM, et al. The use of immobilized osteogenic growth peptide on gradient substrates synthesized via clickchemistry to enhance MC3T3-E1 osteoblast proliferation. Biomaterials. 2010 Mar;31(7):1604-11.