Osteogenic Growth Peptide, OGP

Cat. No.: HY-P1563

CAS No.: 132996-61-3

Molecular Formula: $C_{68}H_{110}N_{22}O_{18}$

Molecular Weight: 1523.74

Sequence: Ala-Leu-Lys-Arg-Gln-Gly-Arg-Thr-Leu-Tyr-Gly-Phe-Gly-Gly

Sequence Shortening: ALKRQGRTLYGFGG

Target: Others

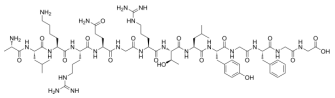
Pathway: Others

Storage: Sealed storage, away from moisture

Powder -80°C 2 years

-20°C 1 year

* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



SOLVENT & SOLUBILITY

In Vitro

H_2O : 100 mg/mL (65.63 mM; Need ultrasonic)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	0.6563 mL	3.2814 mL	6.5628 mL
	5 mM	0.1313 mL	0.6563 mL	1.3126 mL
	10 mM	0.0656 mL	0.3281 mL	0.6563 mL

Please refer to the solubility information to select the appropriate solvent.

BIOLOGICAL ACTIVITY

Description

Osteogenic Growth Peptide, OGP is a short, naturally occurring 14-mer growth factor peptide found in serum at μM concentrations.

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 (NH_2-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].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Patent. US20230068165A1.
- Heliyon. 12 July 2022, e09936.

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REFERENCES

[1]. 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.

[2]. Pigossi SC, et al. Role of Osteogenic Growth Peptide (OGP) and OGP(10-14) in Bone Regeneration: A Review. Int J Mol Sci. 2016 Nov 22;17(11). pii: E1885.

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