



## Product Data Sheet

**Product Name:** [Gla<sup>17,21,24</sup>]-Osteocalcin (1-49)  
**Catalog Number:** AS-22829 (0.1 mg) Lot Number: See label on vial  
AS-22830 (0.5 mg)  
AS-22831 (1 mg)

**Sequence:** 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 (Gla= $\gamma$  - Carboxyglutamic Acid; Disulfide bridge: 23 - 29) (3-letter code)  
YLYQWLGAPVPYPDPL-Gla-PRR-Gla-VC-Gla-LNPDCDELADHIG  
FQEAYRRFYGPV (Gla= $\gamma$ -Carboxyglutamic Acid; Disulfide bridge: 23-29) (1 letter code)

**Molecular Weight:** 5929.5

**% Peak Area by HPLC:**  $\geq$  95

**Appearance:** Lyophilized white powder

**Peptide Reconstitution:** Use 1.0% NH<sub>4</sub>OH as the solvent, followed by buffer (i.e. 1XPBS). Add 1.0% NH<sub>4</sub>OH directly to the lyophilized peptide powder (add 35-40  $\mu$ l to 0.5 mg peptide or 70-80  $\mu$ l to 1 mg peptide). The peptide cannot be stored long term in 1.0% NH<sub>4</sub>OH, and it is therefore important to immediately dilute this solution with 1X PBS or other buffer to a concentration of approximately 1mg/mL or less. Gently vortex to mix.

**Storage:** Peptide is shipped at ambient temperature. Upon receipt, store lyophilized powder at  $-20^{\circ}\text{C}$  or lower. Reconstituted peptide should be aliquoted into several freezer vials and stored at  $-20^{\circ}\text{C}$  or lower. Do not freeze thaw.

**Description:** Osteocalcin (OC) is a 49 amino acid peptide found exclusively in bone tissue and is highly conserved among species. It is a vitamin K- and D-dependent protein produced by osteoblasts, osteocytes and odontoblasts. It is deposited in extracellular bone matrix and is found in the serum. Serum osteocalcin, hydrolysed in the kidney and liver, is considered a specific marker of osteoblast activity and bone formation rate. It may be involved in regulation of osteoblast function, regulation of bone turnover and/or mineralization. Ref: Ivaska, K. et al. *J Biol Chem* **279**, 18361 (2004); Lee, A. et al. *Ann Clin Biochem* **37**, 432 (2000); Price, P. et al. *Proc Natl Acad Sci USA* **77**, 2234 (1980); Salisbury, C. et al. *Ann Rheum Dis* **56**, 558 (1997).

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