

## Teriparatide Acetate

Cat. No. CEPP-003

Lot. No. (See product label)

### Introduction

#### Description

Teriparatide is a synthetic peptide composed of the first 34 amino acids of human parathyroid hormone (PTH), which has 84 amino acids in total. This fragment represents the biologically active N-terminal region of endogenous PTH. Teriparatide mediates bone metabolism through multiple mechanisms. Inhibition of Osteoblast Apoptosis: Teriparatide reduces the apoptosis of osteoblasts, thereby increasing their survival time and promoting bone formation. Activation of Lining Cells and Enhancement of Osteoblast Differentiation: Teriparatide regulates the adenylyl cyclase-cAMP-protein kinase A signaling pathway to intermittently stimulate PTH-I receptors on the surface of osteoblasts, lining cells, and bone marrow stromal stem cells. This stimulation promotes the differentiation of osteoblasts and extends their lifespan. Through the phosphatidylinositol phosphate-C-intracellular calcium-protein kinase C signaling pathway, teriparatide stimulates the proliferation of osteoblast cell lines. Teriparatide also inhibits the transactivation activity of PPAR $\gamma$ , reducing the differentiation of stromal cells into adipocytes, thereby increasing the number of osteoblasts. Regulation of Cytokines: Teriparatide induces the binding of IGF-1 to osteoblasts, promoting bone formation. It regulates the bone formation process through the Wnt signaling pathway, thereby increasing bone formation.

#### Applications

For use in osteoporosis. Treatment of osteoporosis in menopausal women and also in male patients with primary or hypogonadal osteoporosis.

### Product Information

**CAS No.** 52232-67-4

**Molecular Formula** C181H291N55O51S2

**Molecular Weight** 4117.72 g/mol

**Purity** 98%

**Amino Acid Sequence** H-Ser-Val-Ser-Glu-Ile-Gln-Leu-Met-His-Asn-Leu-Gly-Lys-His-Leu-Asn-Ser-Met-Glu-Arg-Val-Glu-Trp-Leu-Arg-Lys-Lys-Leu-Gln-Asp-Val-His-Asn-Phe-OH

### Usage and Packaging

**Package** 1G/Bottle, 10G/Bottle, 50G/Bottle or at customers requirement.

### Storage and Shipping Information

**Storage** 2~8°C