

产品名称: **Parathyroid Hormone Fragment (1-34)**

产品别名: 特立帕肽 ; **Teriparatide**

**生物活性:**

Description	Teriparatide is a PHT agonist, with an IC <sub>50</sub> of 2 nM in HEK293 cells.				
IC <sub>50</sub> & Target	IC50: 2 nM (PTH)[1].				
In Vivo	<p>Trabecular bone calcium and dry weight of the distal femur increased significantly in Teriparatide-treated animals. The increase in trabecular calcium compared with vehicle control occurred as early as 1 week after initiation of treatment with a 35% and 45% increase, respectively, for 10 µg/kg and 40 µg/kg Teriparatide. Similar results were observed for trabecular dry weight. After 4 weeks of treatment with 10 mg/kg or 40 mg/kg Teriparatide, trabecular calcium increased significantly by 70% and 123%, respectively compared with the vehicle and by 73%[1].</p> <p>The 4-week Teriparatide administration increase the pore ratio, number, and density as well as the cortical area, thickness, and bone mineral content (BMC), without significant influencing the volumetric bone mineral density (BMD). The 4-week Teriparatide administration + 8-week vehicle administration decrease the pore ratio, number, and density as well as the cortical area and thickness, compared with the 4-week Teriparatide administration, but the pore ratio, cortical area, and thickness are still higher compared with the 12-week vehicle administration. The 4-week Teriparatide administration + 8-week higherdose IBN administration increase the cortical area, thickness, BMC, and volumetric BMD and decrease the pore ratio, but not the pore number or density, compared with the 4-week Teriparatide administration + 8-week vehicle administration[2].</p>				
Solvent&Solubility	<b><i>In Vitro:</i></b> <b>H<sub>2</sub>O : ≥ 50 mg/mL (12.14 mM)</b>  * "≥" means soluble, but saturation unknown.				
	Preparing Stock Solutions	<div><div>Solvent Concentration</div><div>Mass</div></div>	1 mg	5 mg	10 mg
		1 mM	0.2429 mL	1.2143 mL	2.4285 mL
		5 mM	0.0486 mL	0.2429 mL	0.4857 mL
		10 mM	0.0243 mL	0.1214 mL	0.2429 mL
<p>*请根据产品在不同溶剂中的溶解度选择合适的溶剂配制储备液。一旦配成溶液，请分装保存，避免反复冻融造成的产品失效。</p> <p>储备液的保存方式和期限 -80°C, 6 months; -20°C, 1 month。 -80°C 储存时，请在 6 个月内使用，-20°C 储存时，请在 1 个月内使用。</p>					
References	<p>[1]. Frolik CA, et al. Comparison of recombinant human PTH(1-34) (LY333334) with a C-terminally substituted analog of human PTH-related protein(1-34) (RS-66271): In vitro activity and in vivo pharmacological effects in rats. J Bone Miner Res. 1999 Feb;14(2):163-72.</p> <p>[2]. Iwamoto J, et al. Influence of Teriparatide and Ibandronate on Cortical Bone in New Zealand White Rabbits: A HR-QCT Study. Calcif Tissue Int. 2016 Nov;99(5):535-542.</p>				
实验参考:					
	<p>Rats[1]</p> <p>Teriparatide is administered daily to 4-week-old male rats for 1, 2, or 4 weeks with different concentrations (10, 40 µg/kg). At each time point, longitudinal growth, expressed as maximal femur</p>				

<p><b>Animal Administration</b></p>	<p>length, is not statistically different between treated and control rats or between the two different treatment groups. Midfemur diaphyseal widths also do not differ between groups[1].</p> <p>Rabbits[2]</p> <p>Forty-two female New Zealand white rabbits (17-21 weeks old) are used throughout the study. After 10 days of adaptation to their new environment, the rabbits (18-22 weeks old) are randomized into six groups of 7 animals each using the stratified weight method, as follows: 4-week vehicle administration group (4W-Veh), 4-week Teriparatide (TPTD) administration group (4W-Teriparatide: 20 µg/kg, subcutaneously [s.c.], daily), 12-week vehicle administration group (12W-Veh), 4-week Teriparatide administration + 8-week vehicle administration group (4W-Teriparatide + 8W-Veh), 4-week Teriparatide administration + 8-week lower-dose IBN administration group (4W-Teriparatide + 8W-IBN(L): 20 µg/kg of IBN, s.c., every 4 weeks), and 4-week Teriparatide administration + 8-week higher-dose IBN administration group (4W-Teriparatide + 8W-IBN(H): 100 µg/kg of IBN, s.c., every 4 weeks)[2].</p>
<p><b>References</b></p>	<p>[1]. <u>Frolik CA, et al. Comparison of recombinant human PTH(1-34) (LY333334) with a C-terminally substituted analog of human PTH-related protein(1-34) (RS-66271): In vitro activity and in vivo pharmacological effects in rats. J Bone Miner Res. 1999 Feb;14(2):163-72.</u></p> <p>[2]. <u>Iwamoto J, et al. Influence of Teriparatide and Ibandronate on Cortical Bone in New Zealand White Rabbits: A HR-QCT Study. Calcif Tissue Int. 2016 Nov;99(5):535-542.</u></p>

源叶生物