

Teriparatide

Cat. No.:	HY-P0059	
CAS No.:	52232-67-4	
Molecular Formula:	C ₁₈₁ H ₂₉₁ N ₅₅ O ₅₁ S ₂	
Molecular Weight:	4117.72	SVSEIQLMHNLGKHLNSMERVEWLRKKLQDVHNF
Sequence:	Ser-Val-Ser-Glu-Ile-Gln-Leu-Met-His-Asn-Leu-Gly-Lys-His-Leu-Asn-Ser-Met-Glu-Arg-Val-I-Glu-Trp-Leu-Arg-Lys-Lys-Leu-Gln-Asp-Val-His-Asn-Phe	
Sequence Shortening:	SVSEIQLMHNLGKHLNSMERVEWLRKKLQDVHNF	
Target:	Others	
Pathway:	Others	
Storage:	Sealed storage, away from moisture and light	
	Powder -80°C 2 years	
	-20°C 1 year	
	* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture and light)	

SOLVENT & SOLUBILITY

In Vitro	H ₂ O : 100 mg/mL (24.29 mM); Need ultrasonic)				
		Solvent Concentration	Mass		
	Preparing Stock Solutions		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	
Please refer to the solubility information to select the appropriate solvent.					
In Vivo	1. Add each solvent one by one: PBS Solubility: 50 mg/mL (12.14 mM); Clear solution; Need ultrasonic				

BIOLOGICAL ACTIVITY

Description	Teriparatide (Human parathyroid hormone-(1-34)) is a PTH1 receptor agonist. Teriparatide (Human parathyroid hormone-(1-34)) can be used for osteoporosis research ^[1] .
IC₅₀ & Target	IC ₅₀ : 2 nM (PTH) ^[1] .
In Vivo	Teriparatide (Human parathyroid hormone-(1-34)) (20 µg/kg, i.h.; daily, for 4 weeks; female New Zealand white rabbits) increases the cortical thickness and porosity ^[1] .

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

Animal Model:	Female New Zealand white rabbits ^[1]
Dosage:	20 µg/kg
Administration:	Subcutaneous injection; daily, for 4 weeks
Result:	Increased 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).

CUSTOMER VALIDATION

- Nat Commun. 2023 May 31;14(1):3159.
- Biomed Pharmacother. 2019 Feb 18;112:108578.
- J Orthop Translat. 2022 Dec 7;38:241-255.
- J Cell Physiol. 2024 May 20.
- bioRxiv. 2024 Jul 26:2024.07.26.605282.

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REFERENCES

[1]. 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

Caution: Product has not been fully validated for medical applications. For research use only.

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