

## Parathyroid hormone (1-34) (rat) acetate

<b>Cat. No.:</b>	HY-P2279A
<b>Molecular Formula:</b>	C <sub>182</sub> H <sub>295</sub> N <sub>55</sub> O <sub>50</sub> S <sub>2</sub>
<b>Molecular Weight:</b>	4117.76
<b>Sequence:</b>	Ala-Val-Ser-Glu-Ile-Gln-Leu-Met-His-Asn-Leu-Gly-Lys-His-Leu-Ala-Ser-Val-Glu-Arg-Met -Gln-Trp-Leu-Arg-Lys-Lys-Leu-Gln-Asp-Val-His-Asn-Phe <small>AVSEIQLMHNLGKHLASVERMQWLRKKLQDVHNF (acetate salt)</small>
<b>Sequence Shortening:</b>	AVSEIQLMHNLGKHLASVERMQWLRKKLQDVHNF
<b>Target:</b>	Thyroid Hormone Receptor
<b>Pathway:</b>	Vitamin D Related/Nuclear Receptor
<b>Storage:</b>	Sealed storage, away from moisture and light, under nitrogen 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, under nitrogen)

### SOLVENT & SOLUBILITY

#### In Vitro

H<sub>2</sub>O : ≥ 100 mg/mL (24.29 mM)  
\* "≥" means soluble, but saturation unknown.

	Solvent Concentration	Mass	1 mg	5 mg	10 mg
Preparing Stock Solutions	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.

### BIOLOGICAL ACTIVITY

#### Description

Parathyroid hormone (1-34) (rat) (acetate) is a parathyroid hormone. Parathyroid hormone (1-34) (rat) improves both cortical and cancellous bone structure. Parathyroid hormone (1-34) (rat) can be used for the research of osteoporosis<sup>[1][2]</sup>.

#### In Vivo

Parathyroid hormone (1-34) (rat) (acetate) (s.c; 40 mg/kg; per day; for 4 weeks) promotes the formation of bone<sup>[1]</sup>. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	ovariectomized (Ovx) rats <sup>[1]</sup>
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Dosage:	40 mg/kg
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Administration:	s.c, per day, for 4 weeks
Result:	Preserved Cn-BV/TV and trabecular connectivity, and combined estrogen and PTH caused a 40% increment in Cn-BV/TV while maintaining comparable trabecular connectivity with that seen in the Shamoperated animals. Prevented further loss of connectivity and Cn-BV/TV, and combined estrogen and PTH resulted in as much as a 300% improvement in one of the parameters of trabecular connectivity, node to node strut length, and a 106% increase in Cn-BV/TV, with respect to the bone status at the initiation of treatment.

## REFERENCES

- [1]. Yebin Jiang, et al. Recombinant human parathyroid hormone (1-34) [teriparatide] improves both cortical and cancellous bone structure. J Bone Miner Res. 2003 Nov;18(11):1932-41.
- [2]. V Shen, et al. Loss of cancellous bone mass and connectivity in ovariectomized rats can be restored by combined treatment with parathyroid hormone and estradiol. J Clin Invest. 1993 Jun;91(6):2479-87.

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

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