



LKT Laboratories, Inc.

Parathyroid Hormone-Related Protein (1-34), human/rat

Phone: 888-558-5227  
651-644-8424  
Fax: 888-558-7329  
Email: [getinfo@lktlabs.com](mailto:getinfo@lktlabs.com)  
Web: [lktlabs.com](http://lktlabs.com)

## Product Information

Product ID P7628

CAS No. 112540-82-6

### Chemical Name

Synonym PTHrP, Hypercalcemia Malignancy Factor (1-34), human, mouse, rat

Formula  $C_{180}H_{287}N_{57}O_{48}$

Formula Wt. 4017.65

Melting Point

Purity  $\geq 95\%$

Solubility

Store Temp  $-20^{\circ}C$

Ship Temp Ambient

**Description** PTH (parathyroid hormone)-related protein (PTH-RP) binds the PTH1 receptor and exhibits anti-osteoporotic, anti-angiogenic, and pro-fibrotic activities. PTH (1-34) is an endogenous peptide that is clinically used to treat osteoporosis, as it promotes bone formation, increases bone mineral density, enhances bone strength, and improves bone biomechanical properties. In vivo, PTH-RP downregulates expression of collagen type 1 and RANKL and also decreases activity of osteoblasts. PTH-RP activates PKA signaling to inhibit angiogenesis in vitro in an HSP70-mediated manner but also promotes the epithelial-to-mesenchymal transition (EMT) in vitro and in vivo, potentially enhancing cancer aggressiveness and metastasis. Additionally, PTH-RP promotes fibrosis by activating hepatic stellate cells and increasing levels of matrix metalloproteinase 2 (MMP2), collagen, TGF- $\beta$ , and  $\alpha$ -SMC in vitro.

H-Ala-Val-Ser-Glu-His-Gln-Leu-Leu-His-Asp-Lys-Gly-Lys-Ser-Ile-Gln-Asp-Leu-Arg-Arg-Arg-Phe-Phe-Leu-His-His-Leu-Ile-Ala-Glu-Ile-His-Thr-Ala-OH

## Pricing and Availability

*Bulk quantities available upon request*

Product ID	Size	List Price
P7628	0.5 mg	\$225.80
P7628	1 mg	\$393.80
P7628	2.5 mg	\$787.50

**References** Ongkeko WM, Burton D, Kiang A, et al. Parathyroid Hormone Related-Protein Promotes Epithelial-to-Mesenchymal Transition in Prostate Cancer. *PLoS One*. 2014 Jan 22;9(1):e85803. PMID: 24465715.

Augustine M, Horwitz MJ. Parathyroid hormone and parathyroid hormone-related protein analogs as therapies for osteoporosis. *Curr Osteoporos Rep*. 2013 Dec;11(4):400-6. PMID: 24078470.

Liang FF, Liu CP, Li LX, et al. Activated effects of parathyroid hormone-related protein on human hepatic stellate cells. *PLoS One*. 2013 Oct 7;8(10):e76517. PMID: 24116114.

Xu J, Rong H, Ji H, et al. Effects of different dosages of parathyroid hormone-related protein 1-34 on the bone metabolism of the ovariectomized rat model of osteoporosis. *Calcif Tissue Int*. 2013 Sep;93(3):276-87. PMID: 23807531.

Saini V, Marengi DA, Barry KJ, et al. Parathyroid hormone (PTH)/PTH-related peptide type 1 receptor (PPR) signaling in osteocytes regulates anabolic and catabolic skeletal responses to PTH. *J Biol Chem*. 2013 Jul 12;288(28):20122-34. PMID: 23729679.

Grzesiak JJ, Smith KC, Chalberg C, et al. Heat shock protein-70 expressed on the surface of cancer cells binds parathyroid hormone-related protein in vitro. *Endocrinology*. 2005 Aug;146(8):3567-76. PMID: 15878959.

Bakre MM, Zhu Y, Yin H, et al. Parathyroid hormone-related peptide is a naturally occurring, protein kinase A-dependent

**Caution:** This product is intended for laboratory and research use only. It is not for human or drug use.