

Parathyroid hormone and parathyroid hormone-related peptide

Overview: Parathyroid hormone (PTH) and parathyroid hormone-related peptide (PTHrP) receptors (provisional nomenclature) are activated by precursor-derived peptides: PTH (84 amino acids, ENSG00000152266), PTHrP (141 amino-acids and related peptides (PTHrP-1-36, PTHrP-38-94 and osteostatin (PTHrP-107-139) (ENSG0000087494) and TIP39 (39 amino acids, ENSG00000142538). [¹²⁵I]-PTH may be used to label both PTH₁ and PTH₂ receptors.

Nomenclature	PTH ₁	PTH ₂
Other names	PTH/PTHrP, PPR	–
Ensembl ID	ENSG00000160801	ENSG00000144407
Principal transduction	G _s , G _{q/11}	G _s , G _{q/11}
Rank order of potency	PTH = PTHrP	TIP39, PTH >> PTHrP
Selective agonists	–	TIP39 (Hoare <i>et al.</i> , 2000)
Selective antagonists	–	TIP-9-39 (Jonsson <i>et al.</i> , 2001)

Although PTH is an agonist at human PTH₂ receptors, it fails to activate the rodent orthologues. TIP39 is a weak antagonist at PTH₁ receptors (Jonsson *et al.*, 2001).

Abbreviations: PTH, parathyroid hormone; PTHrP, parathyroid hormone-related peptide; TIP39, tuberoinfundibular protein of 39 residues

Further Reading

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References

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