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-β, and α-SMC in vitro.

References


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.