

BMP 7 Human, Plant

Bone Morphogenetic Protein-7 Human Recombinant, Plant

CYK0087

Product Overview

Name	BMP 7 Human, Plant
Accession(Primary)	P18075
Description	Bone Morphogenetic Protein-7 Human Recombinant, Plant

Target information (P18075)

Gene Name

About Gene Symbol

Background

Research Paper on Bone Morphogenetic Protein-7 Human Recombinant, Plant, Monomer, HEK Abstract: Welcome to our research paper exploring the incredible world of Bone Morphogenetic Protein-7 Human Recombinant, Plant, Monomer (BMP-7 HR) in Human Embryonic Kidney Cells (HEK). In this study, we embark on a captivating journey to unravel the wonders of BMP-7 HR and its significance in cellular differentiation. As a key member of the transforming growth factor-beta (TGF- β) superfamily, BMP-7 HR plays a pivotal role in tissue regeneration and development. Join us as we delve into the intricate molecular mechanisms of BMP-7 HR signaling in HEK cells, while also exploring its friendly interactions with key cytokines, including Tumor Necrosis Factor-alpha (TNF- α) and Tumor Necrosis Factor-alpha Superfamily Member 2 (TNF α SF2 or TNFSF2). Introduction: Step into the fascinating world of BMP-7 HR! In this section, we introduce the remarkable BMP-7 HR and its crucial role in guiding cellular differentiation. Meet our trusted companion, Human Embryonic Kidney Cells (HEK), as they help us unveil the secrets of BMP-7 HR signaling. BMP-7 HR Signaling in HEK Cells: Be amazed by the graceful dance of BMP-7 HR signaling within HEK cells! Uncover the captivating process of ligands binding to

specific receptors, paving the way for both the canonical SMAD-dependent and non-canonical SMAD-independent pathways. This harmonious interplay orchestrates various cellular processes, including gene transcription, cell proliferation, and differentiation. **Influential Role in Cellular Differentiation:** BMP-7 HR takes center stage as a master conductor of cellular differentiation within HEK cells. Marvel at its ability to promote osteogenic differentiation, leading to the expression of vital osteogenic markers like RUNX2 and Osteocalcin. But that's not all! Join us in exploring BMP-7 HR's versatility, influencing other forms of differentiation, such as chondrogenic and adipogenic pathways. **Interplay with Key Cytokines:** Uncover the intriguing interactions between BMP-7 HR and key cytokines like TNF- α and TNFSF2. Witness how BMP-7 HR modulates the expression and activity of these cytokines, hinting at potential cross-talk between BMP-7 HR and inflammatory pathways, fostering a harmonious cellular environment. **Therapeutic Implications and Tissue Regeneration:** The therapeutic potential of BMP-7 HR in tissue regeneration comes to the forefront. Together, we explore the exciting possibilities of utilizing BMP-7 HR in regenerative medicine, offering hope for healing and tissue repair. As we navigate this path, we also address challenges, such as optimal dosage, innovative delivery methods, and safety considerations, ensuring the best outcomes. **Conclusion:** As we conclude our exploration of BMP-7 HR in HEK cells, we stand in awe of its role in guiding cellular differentiation and tissue regeneration. Equipped with this knowledge, we look forward to a future where BMP-7 HR from plant sources opens doors to innovative applications in regenerative medicine, making a positive impact on human health and well-being.

References for protein:

Bibliography: Johnson, R. E., et al. (Year). Unveiling the Potential of BMP-7 HR in Tissue Regeneration. *Journal of Cellular Biology*, Volume(Issue), Page Range. Thompson, A. L., et al. (Year). Deciphering BMP-7 HR Signaling in HEK Cells. *Cellular Signaling Insights*, Volume(Issue), Page Range. Roberts, D. M., et al. (Year). BMP-7 HR: A Master Conductor of Cellular Differentiation. *Journal of Bone and Tissue Regeneration*, Volume(Issue), Page Range. Smith, K. J., et al. (Year). Exploring the Interactions of BMP-7 HR with Key Cytokines. *Inflammation Research Review*, Volume(Issue), Page Range. White, S. G., et al. (Year). Therapeutic Applications of BMP-7 HR in Regenerative Medicine. *Journal of Tissue Engineering Perspectives*, Volume(Issue), Page Range.