

BMP6 Human

Bone Morphogenetic protein-6 Human Recombinant

CYK0092

Product Overview

Name	BMP6 Human
Accession(Primary)	P22004
Immunogen	Anti-human BMP7 mAb, is derived from hybridization of mouse SP2/O myeloma cells with spleen cells from BALB/c mice immunized with Recombinant human BMP7 amino acids 293-431 purified from E. coli.
Description	Bone Morphogenetic protein-6 Human Recombinant

Target information (P22004)

Gene Name

About Gene Symbol

BMP6 (Bone Morphogenetic Protein 6) is a cytokine and immune signaling protein involved in TGF- β signaling. It is an important research target in bone biology and is widely studied to elucidate cellular mechanisms and identify therapeutic targets.

Background

Bone Morphogenetic Protein-6 Human Recombinant: Unraveling its Therapeutic Potential in Tissue Engineering and Regenerative Medicine Abstract: Bone Morphogenetic Protein-6 (BMP-6) human recombinant is a critical member of the bone morphogenetic protein family, known for its pivotal role in tissue development, repair, and regeneration. This research paper aims to provide a comprehensive

analysis of BMP-6, including its characteristics, signaling pathways, and potential therapeutic applications. Moreover, innovative methodologies for the production and optimization of BMP-6 human recombinant are proposed, shedding light on its future implications in the field of tissue engineering and regenerative medicine. Introduction: Tissue engineering and regenerative medicine have emerged as promising approaches to address the challenges associated with tissue repair and regeneration. BMP-6, a prominent member of the BMP family, plays a key role in regulating cellular responses during tissue development and healing. This paper explores the distinctive features of BMP-6 and presents novel approaches for the production and optimization of BMP-6 human recombinant, aiming to unlock its therapeutic potential in diverse regenerative contexts. Characteristics and Signaling Pathways: BMP-6 is a secreted growth factor belonging to the transforming growth factor-beta (TGF- β) superfamily. It exerts its biological effects by binding to specific cell surface receptors, initiating intricate intracellular signaling pathways. BMP-6 signaling cascades, including Smad-dependent and Smad-independent pathways, orchestrate critical processes such as cell differentiation, proliferation, and extracellular matrix synthesis, thereby influencing tissue development and repair. Production of BMP-6 Human Recombinant: Efficient production methodologies are vital for harnessing the therapeutic potential of BMP-6 human recombinant. Recombinant protein expression systems, including mammalian cells or baculovirus-insect cell systems, have been employed for the production of functional BMP-6. Optimization strategies, such as codon optimization, signal peptide engineering, and protein folding enhancement, have been implemented to enhance the yield and bioactivity of BMP-6 recombinant protein. Potential Therapeutic Applications: BMP-6 human recombinant holds immense promise in the field of tissue engineering and regenerative medicine. Its regulatory role in bone formation, cartilage regeneration, and wound healing positions it as a potential therapeutic candidate for the treatment of skeletal disorders, osteoarthritis, and tissue injuries. Furthermore, the ability of BMP-6 to modulate cell behavior and tissue remodeling indicates its wider therapeutic applications in various regenerative processes. Conclusion: BMP-6 human recombinant emerges as a crucial regulator in tissue engineering and regenerative medicine, offering significant potential for tissue repair and regeneration. Optimizing production methodologies and further unraveling its signaling mechanisms will undoubtedly enhance its therapeutic applications. Given its involvement in bone and cartilage formation, as well as wound healing, BMP-6 human recombinant represents a valuable tool for promoting tissue regeneration and addressing the unmet clinical needs in regenerative medicine.

References for protein:

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