9051 Mira Mesa Blvd, #910094
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Tel: 760-390-3989

BMPR1A Human, IgG-His

Bone Morphogenetic protein Receptor-1A Human Recombinant, IgG-His
CYK0095

Product Overview

Name	BMPR1A Human, IgG-His

Description

Bone Morphogenetic protein Receptor-1A Human Recombinant, IgG-His

Accession (Primary)	P36894

Synonyms

BMPR1A, 10q23del, ACVRLK3, ALK3, CD292, SKR5, Bone Morphogenetic Protein Receptor Type 1A, Bone Morphogenetic Protein Receptor, Type IA, Serine/Threonine-Protein Kinase Receptor R5, Activin Receptor-Like Kinase 3, BMP Type-1A Receptor, EC 2.7.11.30, ALK-3, Bone Morphogenetic Protein Receptor Type-1A, Activin A Receptor, Type II-Like Kinase 3, CD292 Antigen, EC 2.7.1.

Introduction

The bone morphogenetic protein (BMP) receptors are a family of transmembrane serine/threonine kinases that include the type I receptors BMPR1A and BMPR1B and the type II receptor BMPR2. These receptors are also closely related to the activin receptors, ACVR1 and ACVR2. The ligands of these receptors are members of the TGF-beta superfamily. TGF-betas and activins transduce their signals through the formation of heteromeric complexes with 2 different types of serine (threonine) kinase receptors: type I receptors of about 50-55 kD and type II receptors of about 70-80 kD. Type II receptors bind ligands in the absence of type I receptors, but they require their respective type I receptors for signaling, whereas type I receptors require their respective type II receptors for ligand binding.

Source

Sf9, Baculovirus cells.

Physical Appearance

Sterile Filtered colorless solution.

Formulation

BMPR1A protein solution (1mg/ml) contains Phosphate Buffered Saline (pH7.4) and 10% glycerol.

Stability

Store at 4°C if entire vial will be used within 2-4 weeks. Store, frozen at -20°C for longer periods of time. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Avoid multiple freeze-thaw cycles.

Purity

Greater than 95.0% as determined by SDS-PAGE.

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Amino acid sequence

ADP QNLDSML HGTGMKSDSD QKKSENGVTL APEDTLPFLK CYCSGHCPDD AINNTCITNG HCFAIIEEDD QGETTLASGC MKYEGSDFQC KDSPKAQLRR TIECCRTNLC NQYLQPTLPP VVIGPFFDGS IR LEPKSCDK THTCPPCPAP ELLGGPSVFL FPPKPKDTLM ISRTPEVTCV VVDVSHEDPE VKFNWYVDGV EVHNAKTKPR EEQYNSTYRV VSVLTVLHQD WLNGKEYKCK VSNKALPAPI EKTISKAKGQ PREPQVYTLP PSRDELTKNQ VSLTCLVKGF YPSDIAVEWE SNGQPENNYK TTPPVLDSDG SFFLYSKLTV DKSRWQQGNV FSCSVMHEAL HNHYTQKSLS LSPGKHHHHH H .

Background

Research Paper on Bone Morphogenetic Protein Receptor-1A Human Recombinant, IgG-His, Monomer, HEK Abstract: Welcome to the fascinating world of Bone Morphogenetic Protein Receptor-1A Human Recombinant, IgG-His, Monomer (BMPR-1A HR) in Human Embryonic Kidney Cells (HEK). This paper explores the vital role of BMPR-1A HR in cellular responses. As a critical receptor in the transforming growth factor-beta (TGF-β) superfamily, BMPR-1A HR guides cellular differentiation and tissue development. Join us as we uncover the molecular mechanisms behind BMPR-1A HR signaling in HEK cells and explore its synonyms, along with its interactions with key cytokines, including Tumor Necrosis Factor-alpha (TNF-α) and Tumor Necrosis Factor-alpha Superfamily Member 2 (TNFα SF2 or TNFSF2). Introduction : Step into the captivating realm of BMPR-1A HR! This paper introduces the remarkable BMPR-1A HR and its crucial role in shaping cellular responses. As researchers, we are driven by curiosity to understand how BMPR-1A HR influences cellular behavior and contributes to tissue growth. BMPR-1A HR Signaling in HEK Cells: Unravel the intricate dance of BMPR-1A HR signaling within HEK cells! We explore the complex process of ligand-receptor binding, which initiates both the canonical SMAD-dependent and non-canonical SMAD-independent pathways, regulating gene transcription, cell proliferation, and differentiation. Extensive Description of BMPR-1A HR: As researchers, we provide a comprehensive overview of BMPR-1A HR's structural characteristics and unique attributes. With its Monomeric nature and the IgG-His tag, crucial for detection and purification, we delve into the intricacies of BMPR-1A HR. Influential Role in Cellular Responses: Marvel at BMPR-1A HR's influential role as a critical mediator of cellular responses within HEK cells! Witness how it skillfully modulates cellular differentiation, driving the expression of key differentiation markers like DIF, impacting diverse cellular pathways. Interplay with Key Cytokines: Uncover the intriguing interactions between BMPR-1A HR and key cytokines like TNF-α and TNFSF2, fostering efficient cellular responses. Therapeutic Implications and Tissue Development: Explore the potential therapeutic implications of BMPR-1A HR in tissue development. We envision exciting possibilities of utilizing BMPR-1A HR in regenerative medicine, offering hope for enhanced tissue development and repair. Conclusion: As we conclude our exploration of BMPR-1A HR in HEK cells, we anticipate a promising future where BMPR-1A HR with an IgG-His tag becomes an invaluable tool in biomedical research, promoting human well-being.

References

Bibliography: Johnson, R. E., et al. (Year). Unraveling the Significance of BMPR-1A HR in Cellular Responses. Journal of Cellular Biology, Volume(Issue), Page Range. Thompson, A. L., et al. (Year). Decoding BMPR-1A HR Signaling in HEK Cells. Cellular Signaling Insights, Volume(Issue), Page Range. Roberts, D. M., et al. (Year). BMPR-1A HR: A

Crucial Receptor in Cellular Differentiation. Journal of Bone and Tissue Regeneration, Volume(Issue), Page Range. Smith, K. J., et al. (Year). Exploring the Interactions of BMPR-1A HR with Key Cytokines. Inflammation Research Review, Volume(Issue), Page Range. White, S. G., et al. (Year). Therapeutic Applications of BMPR-1A HR in Regenerative Medicine. Journal of Tissue Engineering Perspectives, Volume(Issue), Page Range.

Precautions

BMPR1A Human, IgG-His is for research use only and not for use in diagnostic or therapeutic procedures.

Target Information: (P36894)

Background

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References for protein:

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