

TGFA Human

Transforming Growth Factor-Alpha Human Recombinant

GRF0385

Product Overview

Name	TGFA Human
Accession(Primary)	P01135
Description	Transforming Growth Factor-Alpha Human Recombinant

Target information (P01135)

Gene Name

About Gene Symbol

Background

Title: Transforming Growth Factor-Alpha Human Recombinant, Yeast: A Versatile Biopharmaceutical for Therapeutic Applications Abstract: Transforming Growth Factor-Alpha (TGF- α) is a potent growth factor involved in numerous physiological processes, including cell proliferation, differentiation, and tissue repair. The development of TGF- α human recombinant using yeast expression systems has provided a valuable biopharmaceutical tool for therapeutic applications. This research paper explores the production process, characteristics, and potential therapeutic applications of TGF- α human recombinant derived from yeast, highlighting its versatility and clinical significance. Introduction: TGF- α is a crucial growth factor that regulates cellular functions and plays a vital role in tissue development and repair. Harnessing the therapeutic potential of TGF- α has been limited by challenges in its production and stability. However, the development of TGF- α human recombinant using yeast expression systems has overcome these limitations, making it an attractive biopharmaceutical for therapeutic interventions. Production Process and Characteristics: TGF- α human recombinant derived from yeast is produced through recombinant DNA technology, utilizing yeast cells as expression hosts. Yeast expression

systems offer several advantages, including high expression yields, cost-effectiveness, and the ability to produce correctly folded and biologically active TGF- α . The resulting TGF- α human recombinant closely resembles native TGF- α in terms of structure and function, allowing for effective therapeutic intervention. Therapeutic Applications: TGF- α human recombinant derived from yeast has shown promise in various therapeutic applications. It has been investigated for its wound-healing properties, where it promotes tissue regeneration and accelerates the healing process. Additionally, TGF- α has been explored in tissue engineering and regenerative medicine, playing a crucial role in stimulating cell proliferation and tissue development. Furthermore, TGF- α has been studied in the context of cancer research, as it is involved in tumor growth and angiogenesis, making it a potential target for anticancer therapies. Advantages and Challenges: The use of yeast expression systems for producing TGF- α human recombinant offers several advantages, including scalability, cost-effectiveness, and the ability to produce bioactive protein. However, challenges remain, such as optimizing production processes, purification methods, and ensuring product consistency and stability. Further research is needed to address these challenges and maximize the clinical potential of TGF- α human recombinant derived from yeast. Conclusion: TGF- α human recombinant derived from yeast represents a versatile biopharmaceutical tool with significant therapeutic potential. Its production using yeast expression systems offers advantages in terms of scalability, cost-effectiveness, and bioactivity. The therapeutic applications of TGF- α human recombinant extend to wound healing, tissue engineering, and cancer research. Continued research and development efforts are crucial to optimizing production processes, overcoming challenges, and fully exploiting the clinical benefits of TGF- α human recombinant as a therapeutic agent.

References for protein:

Bibliography: Derynck R, Roberts AB, Winkler ME, et al. Human transforming growth factor- α : precursor structure and expression in E. coli. Cell. 1984;38(2):287-297. Cohen S, Carpenter G, King L Jr. Epidermal growth factor-receptor-protein kinase interactions. Co-purification of receptor and epidermal growth factor-enhanced phosphorylation activity. J Biol Chem. 1980;255(10):4834-4842. Carpenter G, Cohen S. Epidermal growth factor. Annu Rev Biochem. 1979;48:193-216. Luetke NC, Qiu TH, Peiffer RL, et al. TGF α deficiency results in hair follicle and eye abnormalities in targeted and waved-1 mice. Cell. 1993;73(2):263-278. Segarini PR, Nesbitt JE, Li D, et al. The role of integrins α v β 3 and α v β 5 in angiogenesis. Angiogenesis. 1995;3(1):11-24.