

Noggin Human

Noggin Human Recombinant

GRF0276

Product Overview

Name	Noggin Human
Accession(Primary)	Q13253
Description	Noggin Human Recombinant

Target information (Q13253)

Gene Name

About Gene Symbol

Background

Recombinant Human Noggin Growth Beta Factor: A Potent Inhibitor of Bone Morphogenetic Protein Signaling. Abstract: Recombinant human Noggin Growth Beta Factor (Noggin) is a highly conserved protein that acts as a potent antagonist of the Bone Morphogenetic Protein (BMP) signaling pathway. Noggin plays a critical role in embryonic development, tissue homeostasis, and disease processes. This research paper provides a comprehensive analysis of the molecular characteristics, signaling mechanisms, and diverse physiological functions of recombinant human Noggin. Additionally, it explores the therapeutic implications of Noggin in various disorders. Synonyms such as SYM1, SYNS1, and NOG associated with Noggin are discussed throughout the paper to highlight their relevance in scientific literature. Introduction: Recombinant human Noggin Growth Beta Factor (Noggin) is a protein with multifaceted roles in development, tissue homeostasis, and disease. This section introduces Noggin and its synonyms, including SYM1, SYNS1, and NOG, emphasizing their significance and relevance in scientific research. Molecular Characteristics of Noggin : This section explores the molecular characteristics of Noggin, including its primary amino acid sequence, protein structure, and post-translational modifications. The interactions of Noggin with BMPs and other regulatory molecules

are also discussed, highlighting the importance of these interactions in modulating BMP signaling.

Inhibition of BMP Signaling by Noggin: Noggin acts as a potent inhibitor of BMP signaling by binding to BMP ligands and preventing their interaction with BMP receptors. This section delves into the mechanisms through which Noggin interferes with BMP signaling, including competition for receptor binding and sequestration of BMPs in extracellular spaces. The implications of Noggin-mediated inhibition of BMP signaling in development and tissue homeostasis are also discussed.

Physiological Functions of Noggin: Noggin plays critical roles in various physiological processes, including embryonic development, neurogenesis, skeletal development, and joint formation. This section provides an in-depth analysis of Noggin's contributions to these processes, highlighting its role in maintaining proper tissue patterning, cell fate determination, and morphogenesis.

Therapeutic Implications of Noggin: The unique inhibitory properties of Noggin make it an attractive therapeutic candidate for various disorders. This section discusses the potential applications of Noggin in bone and joint diseases, neurological disorders, and cancer. Additionally, it explores the challenges and future prospects of utilizing Noggin as a therapeutic agent.

Clinical Studies and Translational Research: This section reviews clinical studies and translational research involving Noggin, emphasizing its potential in regenerative medicine and tissue engineering. It highlights ongoing efforts to develop Noggin-based therapeutics and discusses the promising results observed in preclinical and clinical studies.