

TNNI3 Human Chimeric

Cardiac Troponin-I Chimeric Human Recombinant

RCP2400

Product Overview

Name	TNNI3 Human Chimeric
Accession(Primary)	P19429
Description	Cardiac Troponin-I Chimeric Human Recombinant

Target information (P19429)

Gene Name

About Gene Symbol

Background

Troponin I (TNNI3) is a crucial regulatory protein in cardiac muscle, playing a central role in the regulation of muscle contraction. Understanding the structure and function of TNNI3 is essential for unraveling the complexities of cardiac muscle physiology and exploring therapeutic interventions for cardiac diseases. Chimeric TNNI3 proteins, which combine segments from different isoforms or species, offer a unique opportunity to investigate the role of specific regions in TNNI3 function and to potentially develop novel therapies. This research aims to provide a comprehensive exploration of chimeric TNNI3 proteins, elucidating their functions, structural significance, and potential applications in cardiology and biomedical research. The primary objective of this research is to elucidate the functional significance of chimeric TNNI3 proteins in cardiac muscle. In vitro and ex vivo experiments, utilizing engineered chimeric TNNI3 constructs and cardiac tissue models, will be conducted to investigate how these proteins influence muscle contractility, calcium sensitivity, and response to pathological conditions. Understanding these mechanisms is fundamental for deciphering the roles of specific TNNI3 regions in cardiac muscle function. The second objective is to assess the therapeutic potential of chimeric TNNI3 proteins in cardiac diseases. Experimental studies involving animal models and cellular systems will

explore the use of chimeric TNNI3 proteins as potential therapeutic agents for heart conditions. These investigations may provide valuable insights into novel treatment strategies targeting cardiac muscle function. The third objective is to explore the broader applications of chimeric TNNI3 proteins in biotechnology and drug development. Research will investigate the use of chimeric TNNI3-expressing cells and tissues as models for studying cardiac disorders and for developing innovative approaches in regenerative medicine and pharmacology. By delving into the functions and roles of chimeric TNNI3 proteins, this research aims to expand our knowledge of cardiac muscle physiology, its implications for cardiac diseases, and its potential applications in cardiology, biotechnology, and drug development