

TNNT1 Human

Slow Skeletal Troponin T Human Recombinant

RCP2403

Product Overview

Name	TNNT1 Human
Accession(Primary)	P13805
Description	Slow Skeletal Troponin T Human Recombinant

Target information (P13805)

Gene Name

About Gene Symbol

Background

The Troponin T1 Slow Skeletal Type (TNNT1) human recombinant protein has emerged as a focal point in biomedical research, offering a key to unraveling the complexities of muscle contraction and its implications in neuromuscular disorders. TNNT1 is a critical component of the troponin complex, which regulates striated muscle contraction by controlling the interaction between actin and myosin. The TNNT1 human recombinant, synthesized through advanced biotechnological techniques, provides a valuable tool to explore the intricate molecular characteristics and functional roles of this essential protein. Understanding the molecular characteristics of TNNT1 is fundamental to comprehending its role in muscle physiology and pathology. TNNT1, a slow skeletal muscle isoform, possesses unique structural features that enable its binding to tropomyosin, a key regulator of muscle contraction. The interactions between TNNT1, tropomyosin, and other troponin subunits are central to the fine-tuned regulation of muscle contraction. TNNT1 is primarily expressed in slow-twitch skeletal muscles, which are responsible for sustained, endurance-type activities. The functional significance of TNNT1 lies in its role in modulating muscle contraction kinetics, allowing for prolonged muscle activity without fatigue. Moreover, TNNT1 mutations have been associated with congenital myopathies and neuromuscular

disorders, emphasizing its crucial role in muscle health. The TNNT1 human recombinant has promising implications for both research and potential therapeutic applications. Researchers can utilize this recombinant protein to investigate the structural and functional properties of TNNT1, shedding light on its interactions with other muscle proteins and its role in muscle diseases. Additionally, TNNT1-based therapies may hold the key to addressing neuromuscular disorders, providing hope for improved treatments and patient outcomes. This research aims to provide a comprehensive analysis of the TNNT1 human recombinant, focusing on its molecular characteristics, functional significance, and potential therapeutic implications. By delving into the intricate nature of TNNT1, we aim to contribute to a deeper understanding of muscle biology and pave the way for future research and therapeutic advancements in the realm of neuromuscular disorders.