



Titin Minigene: Cardiac Research Tool

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Inventors: Marion Greaser, Shijun Li, Wei Guo

The Wisconsin Alumni Research Foundation (WARF) is seeking commercial partners interested in a minigene construct of the titin gene that can be used for cardiac drug research and other applications.

Overview

Titin is a sarcomeric protein expressed primarily in striated muscles. It is responsible for maintaining the structure and biomechanical properties of muscle cells.

In the heart, cardiac titin undergoes developmental size reduction from neonate to adulthood. This reduction results from gradually increased exon skipping between exons 50 and 219 of titin mRNA. UW-Madison researchers and collaborators previously identified Rbm20 as the splicing factor responsible for this process.

The Invention

To study the mechanisms of Rbm20-mediated exon skipping, the researchers have produced a number of minigene constructs (described in Li 2013). The construct comprises exons 64-70 of the titin gene.

Applications

- Cardiac drug research tool

Key Benefits

- Available as a biomaterial

Publications

- Li S., Guo W., Dewey C.N. and Greaser M.L. 2013. Rbm20 Regulates Titin Alternative Splicing as a Splicing Repressor. *Nucleic Acids Res.* 41, 2659–2672.

Tech Fields

- [Research Tools : DNA & RNA tools](#)

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