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Title (English)

Silencing of a novel candidate gene involved in bone metabolism, *in vitro*

Title (Swedish)

Abstract

Osteoporosis is a disease with growing indices in the society of today. To a large extent it is genetically regulated and several candidate genes have been proposed to be involved in the establishment of inter-individual variation in the process of bone metabolism. *Wnt Inhibitory Factor 1 (WIF1)* is known to regulate a group of molecules, Wnts that have been identified as important for bone formation. This degree project is part of the mapping of *WIF1* and involves the silencing of the gene, *in vitro* in bone cell culture. Gene-specific siRNAs were introduced by Magnet Assisted Transfection and gene expression was subsequently evaluated by real-time quantitative PCR. Results revealed that the target gene was successfully silenced with up to 98 % silencing measured, suggesting possibilities for further characterizing the function of this gene and how it is involved in the mechanisms of bone metabolism.

Keywords

Osteoporosis, RNAi, Wnt-signalling, WIF1, Bone cell culture, MATra

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