

## ODN MT01

Cat. No.:	HY-150214
CAS No.:	1817821-77-4
Sequence:	DNA, d(A-C-C-C-C-C-T-C-T-A-C-C-C-C-C-T-C-T-A-C-C-C-C-C-T-C-T)
Target:	Others
Pathway:	Others
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.

## ODN MT 01

## BIOLOGICAL ACTIVITY

<b>Description</b>	ODN MT01 was designed based on human mitochondrial DNA sequences, which is an inhibitory ODN that promotes osteocyte differentiation. ODN MT01 could promote osteoblast maturation and activation in rats, reduce rat alveolar bone absorption caused by periodontitis, regulate the expression levels of osteogenesis-related factors.
<b>In Vitro</b>	ODN MT01 can stimulate the proliferation of BMSCs, the differentiation of BMSCs to osteoblasts and mRNA expression of bone-associated factors including Runx2, Osterix, OPG, RANKL and collagen I in vitro <sup>[2]</sup> .  ODN MT01 nanocomplexes affected the cell cycle and promoted cell proliferation of MG63 cells <sup>[3]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only.
<b>In Vivo</b>	ODN MT01 prevents the loss of alveolar bone in the rats with periodontitis and induced the production of proteins of OPG and Osterix in the bone tissue <sup>[2]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

## REFERENCES

[1]. Zhang Q, Qu X, Liang C, et al. Effect of oligonucleotide MT01 delivered by N-isopropylacrylamide modified polyethyleneimine for bone regeneration. *Front Bioeng Biotechnol.* 2023;11:1204571.

[2]. Shen Y, Feng Z, Lin C, et al. An oligodeoxynucleotide that induces differentiation of bone marrow mesenchymal stem cells to osteoblasts in vitro and reduces alveolar bone loss in rats with periodontitis. *Int J Mol Sci.* 2012;13(3):2877-2892.

[3]. Zheng Y., Lin C., Hou X., Ma N., Yu W., Xu X., et al. (2017). Enhancing the osteogenic capacity of MG63 cells through N-isopropylacrylamide-modified polyethyleneimine-mediated oligodeoxynucleotide MT01 delivery. *RSC Adv.* 7, 27121–27127. 10.1039/c6ra27182k

**Caution: Product has not been fully validated for medical applications. For research use only.**

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA