



a simple and standardized kit
qPCR analysis of validated
microRNA bone biomarkers

Key Publications

1. Zarecki P, et al. miRNAs as biomarkers for osteoporotic vertebral fractures Unpublished

2. Anastasilakis AD et al. Changes of Circulating MicroRNAs in Response to Treatment With Teriparatide or Denosumab in Postmenopausal Osteoporosis. *J Clin Endocrinol Metab.* 2018 Mar 1;103(3):1206-1213

3. Feichtinger X, et al. Bone-related Circulating MicroRNAs miR-29b-3p, miR-550a-3p, and miR-324-3p and their Association to Bone Microstructure and Histomorphometry. *Sci. Rep.* 2018 20;8(1):4867

4. Li et al. 2015, Biomarkers

5. Panach L, et al., Serum Circulating MicroRNAs as Biomarkers of Osteoporotic Fracture. *Calc. Tissue Int.* 2015, 97(5):495-505

6. Weilner S, et al. Differentially circulating miRNAs after recent osteoporotic fractures can influence osteogenic differentiation. *Bone* 2015; 79: 43–51.

7. Kocijan R, Muschitz C, et al. Circulating microRNA signatures in patients with idiopathic and postmenopausal osteoporosis and fragility fractures. *J Clin Endocrinol Metab.* 2016 Aug 23

8. Heilmeier U, Hackl M, et al. Serum microRNAs are indicative of skeletal fractures in postmenopausal women with and without type-2 diabetes and influence osteogenic and adipogenic differentiation of adipose-tissue derived mesenchymal stem cells in vitro. *J Bone Miner Res* 2016 Jun 27.

9. Mäkitie RE, Hackl M, et al. Altered MicroRNA Profile in Osteoporosis Caused by Impaired WNT Signaling. *JCEM* 2018,

10. Kocijan et al., MicroRNA levels in bone and blood change during bisphosphonate and teriparatide therapy in an animal model of postmenopausal osteoporosis. 2019, Under review.

11. Weilner S, et al. Secreted microvesicular miR-31 inhibits osteogenic differentiation of mesenchymal stem cells. *Aging Cell* 2016; 1–11.

12. Qiu W and Kassem M, miR-141-3p inhibits human stromal (mesenchymal) stem cell proliferation and differentiation. *Biochim Biophys Acta*, 2014, 2114–2121

13. Fang T, et al, miR-106b-5p and miR-17-5p suppress osteogenic differentiation by targeting Smad5 and inhibit bone formation. *Exp Cell Res.* 2016, (16)30191-4

14. Fang T, et al, miR-106b-5p and miR-17-5p suppress osteogenic differentiation by targeting Smad5 and inhibit bone formation. *Exp Cell Res.* 2016, (16)30191-4

15. Huang J, et al, MicroRNA-320a Regulates the Osteogenic Differentiation of Human Bone Marrow- Derived Mesenchymal Stem Cells by Targeting HOXA10. *Cell Physiol Biochem*, 2016;38:40-48

16. Zhang L, et al, Overexpression of MiR-335-5p Promotes Bone Formation and Regeneration in Mice. *J Bone Miner Res*, 2017

17. Sun T, et al, miR-375-3p negatively regulates osteogenesis by targeting and decreasing the expression levels of LRP5 and β -catenin. *Plos one*, 2017, 12(2)

18. Novello C, et al, miRNA expression profile in human osteosarcoma: Role of miR-1 and miR-133b in proliferation and cell cycle control. *Exp Ther Med*, 2017, 667-675

19. Wang WW, et al . miR-582-5p inhibits invasion and migration of salivary adenoid cystic carcinoma cells by targeting FOXC. *Jpn J Clin Oncol.*, 2017, 1-9

20. Laxman, N., Mallmin, H., Nilsson, O., Kindmark, A., 2017. miR-203 and miR-320 regulate bone morphogenetic protein-2-induced osteoblast differentiation by targeting distal-less homeobox 5 (Dlx5). *Genes (Basel)*. 8.

21. Gómez-Gómez Y, Organista-Nava J, Ocadiz-Delgado R et al, 2016. The expression of miR-21 and miR-143 is deregulated by the HPV16 E7 oncoprotein and 17 β -estradiol. *Int J Oncol.* 2016 Aug;49(2):549-58.

22. Yu X, Zhang X, Dhakal IB, et al. Induction of cell proliferation and survival genes by estradiol-repressed microRNAs in breast cancer cells. *BMC Cancer* 2012, 12:29.