





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 miRNAs as biomarkers for osteoporotic vertebral fractures Unpublished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  $\beta$ -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 distalless 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 $\beta$ -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.