BIOMEDICA Human Periostin ELISA - References / Publications

Serum periostin levels and severity of fibrous dysplasia of bone.
https://doi.org/10.1016/j.bone.2019.01.004
PMID: 30616028

Characterization of a sandwich ELISA for the quantification of all human periostin isoforms.
https://doi.org/10.1002/jcla.22252
PMID: 28493527

Effect of Teriparatide Treatment on Circulating Periostin and Its Relationship to Regulators of Bone Formation and BMD in Postmenopausal Women With Osteoporosis.
https://doi.org/10.1210/jc.2017-00283

Association between non-alcoholic fatty liver disease and bone turnover biomarkers in post-menopausal women with type 2 diabetes.
https://doi.org/10.1016/j.diabet.2018.10.001
PMID: 30315891

The Utility of Biomarkers in Osteoporosis Management.
https://doi.org/10.1007/s40291-017-0272-1

Effect of age and gender on serum periostin: Relationship to cortical measures, bone turnover and hormones.
https://doi.org/10.1016/j.bone.2017.03.041
PMID: 28323143

A novel highly specific ELISA allows the measurement of human periostin in plasma and serum.
https://doi.org/10.1530/boneabs.5.P19
Novel ELISA for the measurement of human Periostin
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Purpose: Periostin (osteoblast-specific factor OSF-2) is a component of the extracellular matrix and is thought to be involved in osteoblast recruitment, attachment and spreading. As a potential biomarker of bone turnover it may assist in the management of bone diseases. Periostin consists of a conserved N-terminus and a C-terminal region which is affected by alternative splicing. Currently, at least seven splicing isoforms of human Periostin have been identified.

Methods: We developed a sandwich ELISA, which enables the detection of all known human circulating Periostin isoforms. Our novel assay utilizes monoclonal and affinity-purified polyclonal antibodies and recognizes epitopes that are conserved between human and animal species, e.g. mouse, rat, cynomolgus macaque, dog, and cat Periostin.

Results: The novel Periostin ELISA assay is optimized for human serum and plasma and covers a wide calibration range between 125 to 4,000 pmol/l. Assay characteristics, such as precision (intra-assay: ≤3%, inter-assay: ≤6%), dilution linearity (99-115%) and spike-recovery (83 – 106%), the matrix comparison between serum and EDTA-plasma (R2 0,96) as well as sample stability meet the standards of acceptance. Periostin serum and plasma concentrations in apparently healthy individuals are 864 +/- 269 pmol/l (n=24) and 817 +/- 170 pmol/l (n=20), respectively.

Conclusion: This ELISA provides a reliable and accurate tool for the quantitative determination of Periostin in human healthy and diseased samples.