BIOMEDICA Human Periostin ELISA - References / Publications

1. **Characterization of a sandwich ELISA for the quantification of all human periostin isoforms.**
   PMID: 28493527.

2. **Effect of age and gender on serum periostin: Relationship to cortical measures, bone turnover and hormones.**
   Walsh JS, Gossiel F, Scott JR, Paggiosi MA, Eastell R.
   PMID: 28323143.

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Abstract of poster # LB-SU0353

**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 healthy and diseased samples.