



# Human DMP-1 Assay Kit

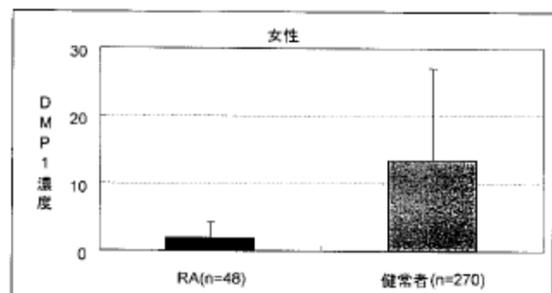
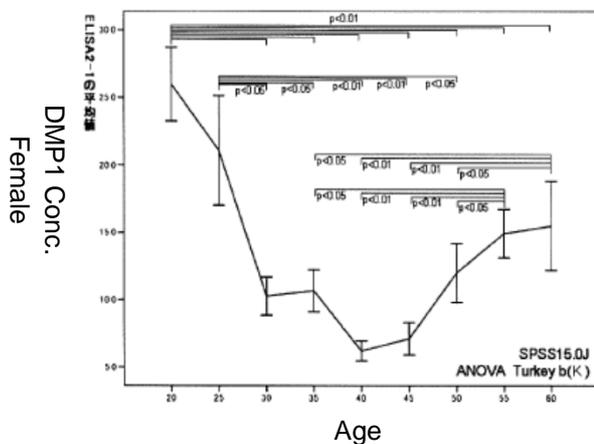
## Osteocyte origin, a biomarker which reflects activities of osteocyte

- Research Use Only-

Dentin Matrix Protein 1 (DMP1) is a protein in one of **proteins in the extracellular matrix** that is family of mall Integrin-Binding Ligand, N-linked Glycoprotein (SIBLING). It is synthesized as a full-length 105kDa proprotein and it is divided into 37kDa at N terminal side and 57kDa at C terminal side in the secretion process. It has a lot of acidic domains and it binds with calcium because of the feature that become negative charged within tissues and it has an important role for **bone mineralization**. DMP1 expresses in osteocyte while other constitutive proteins in extracellular matrix such as Osteopontin, Osteocalcin and Bone sialoprotein **express in osteoblast cells**. Osteocyte which is a main constituent cell of bone regulates activities of osteoclastic cells and osteoblast cells and it adjusts bone remodeling process. It also acts as an endocrine cell which secretes FGF-23. DMP1 in blood is considered as a candidate of **biomarker which reflects activities of osteocyte** and it is also suggested to become useful information for research of bone metabolism and phosphate metabolism.

| Product code | Product Name               | Size    | Measurement Range  | Sample Type | Measuring Samples |             |       |                          |
|--------------|----------------------------|---------|--------------------|-------------|-------------------|-------------|-------|--------------------------|
|              |                            |         |                    |             | Serum             | EDTA-Plasma | Urine | Cell Culture supernatant |
| 27261        | Human DMP1 Assay Kit - IBL | 96 well | 3.6 ~ 230 pmol/L   | H           | ○                 | ○           | ○     | ○                        |
| 27363        | Rat DMP1 Assay Kit - IBL   | 96 well | 39.06 ~ 2500 pg/mL | R           | ○                 | ○           | /     | ○                        |

H: Human R: Rat



Left Diagram is quoted from Patent No. 2013-3066 (P2013-3066A)

### 【References】

1: Sato S, Hashimoto J, Usami Y, Ohyama K, Isogai Y, Hagiwara Y, Maruyama N, Komori T, Kuroda T, Toyosawa S. Novel sandwich ELISAs for rat DMP1: age-related decrease of circulatory DMP1 levels in male rats. *Bone*. 2013 Dec;57(2):429-36.

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