Bone Formation Marker
For Clinical Trials and Patient Monitoring

Postmenopausal osteoporosis
- Monitor skeletal response to anti-resorptive therapies, e.g. HRT, bisphosphonates

Assessment of bone formation in patients
- With metabolic bone diseases, e.g. Paget's disease

The N-MID® Osteocalcin ELISA is used for quantitative assessment of bone formation in serum and plasma. The assay detects total osteocalcin (intact and N-MID fragment) released by osteoblasts to the circulation.
**N-MID® Osteocalcin ELISA**

**ENZYMED IMMUNOASSAY FOR QUANTITATIVE ASSESSMENT OF BONE FORMATION**

**Performance Characteristics**

**Method:** Sandwich ELISA

**Format:** 96-well microplate with reagents sufficient to test 40 samples in duplicate

**Detection limit:** 0.5 ng/mL

**Analyte:** Total osteocalcin (intact and N-MID fragment)

**Specimen:** Serum and plasma

**Specimen volume:** 20 µl

**Precision CV intraassay:** < 4%

**Precision CV interassay:** < 7%

**Species Reactivity:** Human, bovine, dog, goat, pig

**Shelf life:** 18 months

**Assay time:** Approx. 3 hours

The N-MID® Osteocalcin ELISA kit is for *in vitro* only.

Product number #3OSC4000

**Sampling**

Collect blood samples and separate serum or plasma within 3 hours. For prolonged storage samples should be frozen (<-18°C).

<table>
<thead>
<tr>
<th>Analyte Stability</th>
<th>Stability at Different Temperatures</th>
</tr>
</thead>
<tbody>
<tr>
<td>at +4°C</td>
<td>few days</td>
</tr>
<tr>
<td>at -20°C</td>
<td>&gt; 3 years</td>
</tr>
<tr>
<td>at -80°C</td>
<td>&gt; 3 years</td>
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</tbody>
</table>

**Assay Procedure**

1. Prepare the Antibody Solution.
2. Pipette 20 µL of either Standards, Control, or unknown samples into appropriate wells. Add 150 µL of Antibody Solution. Cover the immunostrips with sealing tape and incubate for 120±5 minutes at room temperature (without any mixing).
3. Wash the immunostrips 5 times with Washing Solution diluted 1+50 in distilled water.
4. Pipette 100 µL of the Substrate Solution incubate for 15 ± 2 minutes in the dark (without any mixing). Use sealing tape.
5. Add 100 µL of Stopping Solution to all wells.
6. Measure the absorbance at 450 nm with 650 nm as reference within two hours.

**N-MID® Osteocalcin normal ranges**

- **Postmenopausal Osteoporosis, n=50**
- **Postmenopausal Healthy, n=100**
- **Males**
- **Premenopausal w/ low bone mass, n=20**
- **Premenopausal, n=48**
- **Children, n=20**

**Therapeutic response to anti-resorptive therapy in postmenopausal women**

- **Placebo**
- **1.25mg Tibolone**
- **2.5mg Tibolone**

**LITERATURE:**