

<b>Bone-specific Alkaline Phosphatase</b>							
<b>Description</b>	Marker of osteoblast activity (bone formation).						
<b>Indication</b>	<ul style="list-style-type: none"> <li>• to assess activity of disease in Paget's disease</li> <li>• to monitor response to anti-resorptive therapy</li> <li>• to confirm patient compliance and assess efficacy of new therapies in patients with metabolic bone disease e.g. osteoporosis, Paget's disease, primary hyperparathyroidism and metastatic bone disease</li> <li>• as a bone marker in renal bone disease when other bone markers are affected by renal clearance</li> </ul>						
<b>Additional Info</b>	<p>Bone-specific alkaline phosphatase (bone ALP) constitutes about 40% of serum total ALP in health. It is produced by osteoblasts to provide a high phosphate concentration at the osteoblast cell surface during bone mineralization and is a marker of bone formation. Bone ALP is a more sensitive index of bone formation than total ALP activity.</p> <p>High liver ALP activity in serum (e.g. in hepatobiliary disease) can interfere with the measurement of bone ALP since current immunoassays for bone ALP have up to 20% cross-reactivity with the liver isoform despite using isoform-specific monoclonal antibodies.</p>						
<b>Concurrent Tests</b>	N/A						
<b>Dietary Requirements</b>	N/A						
<b>Interpretation</b>	<p><u>Reference intervals</u></p> <table style="width: 100%; border: none;"> <tr> <td style="width: 150px;">Male:</td> <td style="text-align: right;">10 – 40 U/L</td> </tr> <tr> <td>Female:    Pre-menopausal</td> <td style="text-align: right;">10 – 26 U/L</td> </tr> <tr> <td style="padding-left: 100px;">Post-menopausal</td> <td style="text-align: right;">14 – 50 U/L</td> </tr> </table> <p>The least significant change between samples taken at 3-month intervals is +/- 30%.</p> <p>Bone ALP levels may remain elevated for up to 6-9 months following healing of bone fractures.</p> <p>Paediatric samples and young adults: Bone ALP levels are higher in children and young adults, especially during the pubertal growth spurt (levels 4-5 times adult range).</p>	Male:	10 – 40 U/L	Female:    Pre-menopausal	10 – 26 U/L	Post-menopausal	14 – 50 U/L
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Female:    Pre-menopausal	10 – 26 U/L						
Post-menopausal	14 – 50 U/L						
<b>Collection Conditions</b>	N/A						
<b>Frequency of testing</b>	Single measurements of bone ALP are of limited value. A blood sample should be taken at baseline and 3 months after starting anti-resorptive therapy to monitor response to treatment or disease progression.						