

## IDS-iSYS TRAcP 5b (BoneTRAP<sup>®</sup>)

### Bone Metabolism

An automated assay for the quantitative determination of Tartrate Resistant Acid Phosphatase 5b (TRAcP 5b) in human serum and heparin plasma. The assay is intended for use as an aid in monitoring changes in bone metabolism in response to therapy.

TRAcP is an enzyme that is released from active osteoclasts, macrophages and dendritic cells <sup>1</sup>. There are 2 isoforms found in circulation; 5a is released from macrophages and dendritic cells whereas the 5b form is specific to active osteoclasts. Relative to other bone resorption markers, circulating levels of TRAcP 5b display limited diurnal variation <sup>2</sup> and are unaffected by the fasting status of the patient, allowing the sample collection to be taken at any time of day. As TRAcP 5b is cleared from circulation by the liver <sup>3</sup>, kidney function has no effect on serum TRAcP 5b levels <sup>2,4</sup>; thereby making this a potentially useful marker in patients with impaired renal function.

### Clinical Value

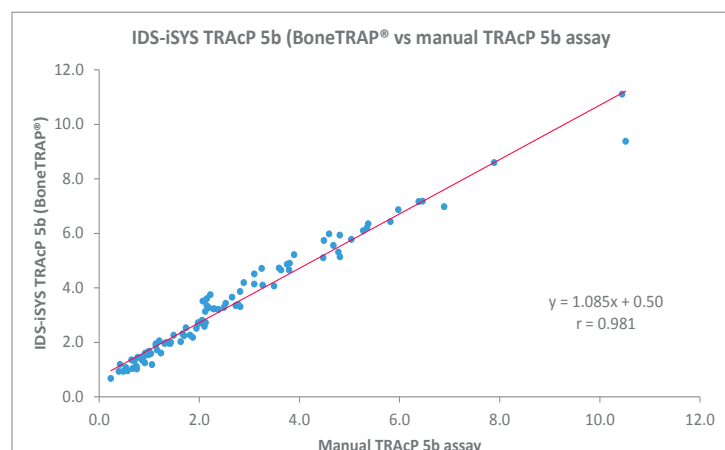
- Only automated solution for measurement of TRAcP 5b in patient sera
- Only marker reflecting bone degradation suitable for use with renal patients
- Excellent sensitivity and reproducible results – providing a useful tool in therapy monitoring
- A complete clinical assay panel supporting bone disease management

## Specifications

Format	Automated magnetic particle immunoenzymatic assay				
Calibrators	Lyophilised – 2 each of 2 concentration levels, 1.0 mL reconstituted volume				
Controls	Lyophilised – 3 each of 3 concentration levels, 1.0 mL reconstituted volume				
Limit of Quantification	0.9 U/L				
Dynamic Range	0.9 – 14.0 U/L				
Reference Range	Population	Mean (U/L)	SD	Median (U/L)	Range (U/L)
	Males	3.2	1.2	3.0	1.4 – 6.1
	Premenopausal females	2.9	0.9	2.7	1.2 – 4.8
	Postmenopausal females	3.3	1.5	3.1	1.1 – 6.9
Minimum Sample Volume	70 µL plus dead volume				
Sample Type	Human serum – including serum collected in serum separator tubes Human plasma – collected in lithium heparin tubes				
Reagent Stability	The IDS-iSYS TRAcP 5b (BoneTRAP®) reagent cartridge may be stored after opening on-board the IDS-iSYS Multi Discipline Automated System or at 2 - 8°C for up to 28 days				
Calibration Stability	The calibration of the IDS-iSYS TRAcP 5b (BoneTRAP®) assay is stable for a maximum of 21 days				
Time to First Result	70 minutes				
Precision	Sample ID	n	Mean (U/L)	Within Run	Total
	1	84	1.7	8.6%	13.6%
	2	84	5.2	2.5%	6.9%
	3	84	8.5	2.5%	5.5%
	4	84	12.0	2.3%	5.0%

## Method Comparison

IDS-iSYS TRAcP 5b (BoneTRAP®) vs established TRAcP 5b ELISA



### Method Comparison

120 samples (range 0.2 – 10.5 U/L) were assessed in both the IDS-iSYS TRAcP 5b (BoneTRAP®) and an established manual TRAcP 5b assay

## Ordering Information

Product	Product Code
IDS-iSYS TRAcP 5b (BoneTRAP®) Reagent pack: 100 tests	IS-4100
IDS-iSYS TRAcP 5b (BoneTRAP®) Control Set Control set: 3 levels	IS-4130

Complementary Products	
IDS-iSYS Ostase® BAP	IS-2800
IDS-iSYS N-MID® Osteocalcin	IS-2900
IDS-iSYS CTX-I (CrossLaps®)	IS-3000
IDS-iSYS Intact PINP	IS-4000



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### References

- Halleen JM. et al. Tartrate-resistant acid phosphatase 5b (TRAcP 5b) as a marker of bone resorption. Clin Lab. 2006;52(9-10):499-509
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- Hannon RA. et al. Clinical performance of immunoreactive tartrate resistant acid phosphatase isoform 5b as a marker of bone resorption. Bone. 2004; 34:187-194.

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