Immunoassays

EIA & RIA Product Portfolio

Commitment to innovation

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Expertise

in Endocrinology Diagnostics

Immunodiagnostic Systems Limited is a leading *in vitro* diagnostic solutions provider to the clinical and research laboratory markets. Since 1977, we have developed, manufactured and marketed innovative immunoassays to provide improved diagnostic outcomes for patients. We offer a wide variety of specialised high quality products, delivering innovative solutions for diagnostics, therapy monitoring and research.

Our Current Endocrinology Research Areas

Calcium Metabolism

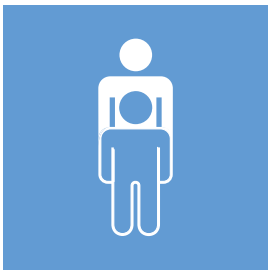
Vitamin D deficiency results in abnormalities in calcium, phosphorus and bone metabolism and affects one billion people worldwide across all ethnicities and age groups[1]. Our comprehensive calcium metabolism panel enables laboratories to measure Vitamin D deficiencies in line with the Clinical Practice Guidelines set by the Endocrine Society[2].

Bone Turnover Markers

Throughout life, old bone is constantly removed (resorption) and replaced by new bone (formation). This continual process is essential for the maintenance of healthy bone mass and micro-architecture. Changes in bone turnover can be effectively assessed by using the comprehensive IDS bone turnover test panel.

Animal Research

IDS offers a complete panel of bone and cartilage turnover markers reflecting the processes in formation and degradation[3]. These markers are suitable for cell culture (e.g. ex vivo cultures of bone and/or cartilage, *in vitro* osteoclast or osteoblasts) and in different animal species and specimens ranging from urine or blood tests from rodents to mammals.



Growth

There are two main types of growth disorders; excessive growth and growth-hormone deficiency. The IDS Growth panel can be used to identify these diseases and conditions, evaluate pituitary function and monitor the effectiveness of growth hormone (GH) treatment.

Cartilage

Cartilage is a connective tissue found in many areas of the body, including joints between bones (articular cartilage). Individuals whose cartilage is affected suffer from joint disease (arthritis) is mainly degenerative and causes arthritis/osteoarthritis (OA), but also inflammatory arthritis including rheumatoid arthritis (RA) and ankylosing spondylitis (AS). IDS is committed to providing highly accurate and reproducible assays and offers the most promising markers according to BIPED criteria to analyse cartilage related events in body fluids or tissues[4].

1. Holick MF., “Vitamin D deficiency”. N. Engl. J. Med. (2007) 357 (3): 266–81
2. The Journal of Clinical Endocrinology & Metabolism 96.7 (2011): 1911-1930
3. Schaller S et al., In vitro, ex vivo, and in vivo methodological approaches for studying therapeutic targets of osteoporosis and degenerative joint diseases: how biomarkers can assist? Assay Drug Dev Technol. 2005 Oct;3(5):553-80
4. Rousseau JC, Delmas PD.Biological markers in osteoarthritis. Nat Clin Pract Rheumatol. 2007 Jun; 3(6):346-56

Calcium Metabolism

25-Hydroxy Vitamin D^{s} EIA

Enzyme immunoassay for the quantitative determination of 25-hydroxyvitamin D

Product	Description	RUO/IVD	Product Code	Size	Certification
Sample Type	• Human serum, plasma (EDTA, heparin, citrate)	IVD	AC-57SF1	96 Wells	CE/FDA
Sample Volume	• 25 µL				
Sensitivity	• Limit of Detection (LoD): 6.9 nmol/L (2.7 ng/mL • Limit of Quantitation (LoQ): 12 nmol/L (4.8 ng/mL)				
Unique Features	• VDSP Certified • Traceable to ID-LCMS/MS 25(OH)D Reference Method Procedure • 4 hours total assay time; 45 minutes hands-on time				

25-Hydroxy Vitamin D RIA

Radioimmunoassay for the quantitative determination of 25-hydroxyvitamin D

Sample Type	• Human serum, plasma (EDTA, heparin)	IVD	AA-35F1	100 Tubes	CE/FDA
Sample Volume	• 50 µL				
Sensitivity	• 3 nmol/L (1.2 ng/mL)				
Unique Features	• 3 hours total assay time; 60 minutes hands-on time				

1,25-Dihydroxy Vitamin D EIA

Complete assay system for the purification of 1,25-dihydroxyvitamin D by immunoextraction with quantitation by enzyme immunoassay

Sample Type	• Human serum, plasma (EDTA, heparin)	IVD	AC-62F1	96 Wells	CE/FDA
Sample Volume	• 500 µL				
Sensitivity	• 6 pmol/L (2.5 pg/mL)				
Unique Features	• Detects both 1,25$(OH)_2$ D_2 and D_3 • Proprietary immunoextraction system • No organic and radioactive waste				

1,25-Dihydroxy Vitamin D RIA

Complete assay system for the purification of 1,25-dihydroxyvitamin D by immunoextraction with quantitation by radioimmunoassay

Sample Type	• Human serum, plasma (EDTA, heparin)	IVD	AA-54F1	40 Cols	CE/FDA
Sample Volume	• 500 µL				
Sensitivity	• 2.1 pg/mL (5 pmol/L)		AA-54F2	56 Cols	
Unique Features	• Detects both 1,25$(OH)_2$ D_2 and D_3 • Proprietary immunoextraction system • No organic waste				

KEY: FDA = FDA 510(k) Cleared | **CE** = CE Marked | * = Not yet listed with FDA as IVD | ** = Not yet CE Marked as IVD

Bone Turnover

Product	Description	RUO/IVD	Product Code	Size	Certification
Alpha CrossLaps® (CTX-I) ELISA					
Quantification of degradation of non-isomerised C-terminal telopeptides of Type I collagen (CTX-I)					
Sample Type	• Urine	IVD	AC-04F1	96 Wells	CE/FDA
Sample Volume	• 25 µL				
Sensitivity	• 0.80 ng/mL				
Unique Features	• 1.5 hours total assay time; 30 minutes hands-on time				
BoneTRAP® (TRAcP 5b) ELISA					
Enzymeimmunoassay for the quantitative determination of Tartrate Resistant Acid Phosphatase 5b					
Sample Type	• Human serum, EDTA plasma	IVD	SB-TR201A	96 Wells	CE
Sample Volume	• 100 µL				
Sensitivity	• <0.5 U/L				
Unique Features	• TRAcP 5b is derived exclusively from bone-resorbing osteoclasts • No accumulation of TRAcP 5b activity into the circulation in renal or hepatic failure				
N-MID® Osteocalcin ELISA					
Quantitative measurement of osteocalcin as an indicator of osteoblastic activity					
Sample Type	• Human serum, plasma (EDTA, heparin)	IVD	AC-11F1	100 Tubes	CE/FDA
Sample Volume	• 20 µL				
Sensitivity	• 0.5 ng/mL				
Unique Features	• Recognises both intact and large N-MID® Osteocalcin fragments with equal affinity				
Ostase®+ BAP EIA					
Ostase® BAP - Quantitative measurement of bone specific alkaline phosphatase as an indicator of osteoblastic activity					
Sample Type	• Human serum	IVD	AC-20F1	96 Wells	CE/FDA
Sample Volume	• 50 µL				
Sensitivity	• 0.7 µg/L				
Unique Features	• 1 hour 15 minutes total assay time; <30 minutes hands-on time				
Serum CrossLaps® (CTX-I) ELISA					
Quantification of degradation products of C-terminal telopeptides of Type I collagen (CTX-I)					
Sample Type	• Human serum, plasma (EDTA, heparin)	IVD	AC-02F1	96 Wells	CE/FDA
Sample Volume	• 50 µL				
Sensitivity	• 0.020 ng/mL				
Unique Features	• 3 hours total assay time; 30 minutes hands-on time				

Bone Turnover

Product	Description	RUO/IVD	Product Code	Size	Certification
Urine BETA CrossLaps® (CTX-I) ELISA					
Quantification of degradation products of C-terminal telopeptides of Type-I collagen (CTX-I)					
Sample Type	• Human urine	IVD	AC-05F1	96 Wells	CE/FDA
Sample Volume	• 10 µL				
Sensitivity	• 0.80 µg/L				
Unique Features	• 3 hours total assay time; 30 minutes hands-on time				
Urine CrossLaps® (CTX-I) EIA					
Quantification of degradation products of C-terminal telopeptides of Type I collagen (CTX-I)					
Sample Type	• Human urine	IVD	AC-03F1	96 Wells	CE
Sample Volume	• 15 µL				
Sensitivity	• 50 µg/L				
Unique Features	• 3 hours total assay time; 45 minutes hands-on time				

Growth

Product	Description	RUO/IVD	Product Code	Size	Certification
Insulin-like Growth Factor-I (IGF-I) IRMA					
Immunoradiometric assay for the determination of IGF-I					
Sample Type	Serum	IVD	CL-BC1110	100 Tubes	CE
Sample Volume	25 µL				
Sensitivity	1.25 ng/mL				
Unique Features	• 2 monocolonal antibodies with high affinity and specificity are used which recognise two different epitopes of IGF-I				
Insulin-like Growth Factor Binding Protein-3 (IGFBP-3) IRMA					
Immunoradiometric assay for the determination of IGFBP-3					
Sample Type	Serum	IVD	CL-BC1014	100 Tubes	CE
Sample Volume	10 µL				
Sensitivity	50 ng/mL				
Unique Features	• One step solid phase immunoradiometric assay • A single IGFBP-3 determination is an excellent screening parameter for growth hormone deficiency				

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Cartilage

Product	Description	RUO/IVD	Product Code	Size	Certification

Urine CartiLaps® (CTX-II) EIA

Assay for the quantification of degradation products of C-terminal telopeptides of type II collagen (CTX-II)

Sample Type	• Urine	IVD	AC-10F1	96 Wells	CE
Sample Volume	• 40 µL				
Sensitivity	• 0.20 µg/L				
Unique Features	• May be used as an aid for assessment of structural damage of articular cartilage in patients with RA and OA				

Human COMP® ELISA

The COMP ELISA is a quantitative enzyme-linked immunosorbent assay for the determination of Cartilage Oligomeric Matrix Protein (COMP) in human serum.

Sample Type	• Serum, Heparin plasma	IVD	AN-14-1006-71	96 Wells	CE
Sample Volume	• 25 µL (pre-diluted 1/10)				
Sensitivity	• <0.1 U/L				

Animal Research

Product	Description	RUO/IVD	Product Code	Size	Certification

CrossLaps® for Culture (CTX-I) ELISA

Quantitative determination of fragments of type I collagen released into bone cell culture supernatants (CTX-I)

Sample Type	Cell culture supernatant	RUO	AC-07F1	96 Wells	Research Use Only**
Sample Volume	50 µL				
Sensitivity	0.44 nM				
Unique Features	• 3 hours total assay time; 45 minutes hands-on time • Allows the use of bone slices in multi-well screening formats				

MouseTRAP™ (TRAcP 5b) ELISA

Quantitative determination of osteoclast-derived tartrate-resistant acid phosphatase form (TRAcP 5b) in mice

Sample Type	• Serum	RUO	SB-TR103	96 Wells	Research Use Only**
Sample Volume	• 25 µL				
Sensitivity	• 0.1 U/L				
Unique Features	• TRAcP 5b is derived exclusively from bone-resorbing osteoclasts • No accumulation of TRAcP 5b activity into the circulation in renal or hepatic failure				

Animal Research

RatLaps™ (CTX-I) EIA

Quantitative determination of fragments of type I collagen in rats/mice and from bone released into cell culture supernatants by osteoclasts (CTX-I)

Product	Description	RUO/IVD	Product Code	Size	Certification
Sample Type	• Rat/mouse serum, urine, cell culture supernatant	RUO	AC-06F1	96 Wells	Research Use Only**
Sample Volume	• 20 µL				
Sensitivity	• 2 ng/mL				
Unique Features	• Possibility of measuring both urine and serum samples • Low sample volume • 60 minutes hands-on time				

Rat-MID™ Osteocalcin EIA

Quantitative determination of Osteocalcin in rats

Sample Type	• Serum, plasma (EDTA, heparin)	RUO	AC-12F1	96 Wells	Research Use Only**
Sample Volume	• 20 µL				
Sensitivity	• 50 ng/mL				
Unique Features	• Low sample volume				

Rat/Mouse PINP EIA

Quantitative determination of N-terminal propeptide of type I procollagen (PINP) in rats/mice

Sample Type	• Serum, plasma (EDTA, heparin)	RUO	AC-33F1	96 Wells	Research Use Only**
Sample Volume	• 5 µL				
Sensitivity	• 0.7 ng/mL				
Unique Features	• Use in conjunction with IDS RatTRAP™ • Low sample volume				

RatTRAP™ (TRAcP 5b) ELISA

Quantitative determination of osteoclast-derived tartrate-resistant acid phosphatase form (TRAcP 5b) in rats

Sample Type	• Serum	RUO	SB-TR102	96 Wells	Research Use Only**
Sample Volume	• 25 µL				
Sensitivity	• 0.1 U/L				
Unique Features	• TRAcP 5b is derived exclusively from bone-resorbing osteoclasts • No accumulation of TRAcP 5b activity into the circulation in renal or hepatic failure				

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Animal Research

Product	Description	RUO/IVD	Product Code	Size	Certification
Animal COMP® ELISA					
Animal COMP ELISA provides a method for the determination of Cartilage Oligomeric Matrix Protein (COMP) in rat, mouse, sheep, bovine, pig and goat serum					
Sample Type	• Serum	RUO	AN-14-2004-86	96 Wells	Research Use Only**
Sample Volume	• 50 µL (pre-diluted 1/10)				
Sensitivity	• <0.2 U/L				
Unique Features	• Multi-species application				
Serum Pre-Clinical CartiLaps® (CTX-II) ELISA					
Assay for the quantitative determination of degradation products of C-terminal telopeptides of type II collagen (CTX-II)					
Sample Type	• Serum	RUO	AC-08F1	96 Wells	Research Use Only**
Sample Volume	• 100 µL				
Sensitivity	• 3.7 pg/mL				
Unique Features	• Reflects cartilage degradation activity				
Urine Pre-Clinical CartiLaps® (CTX-II) EIA					
Assay for the quantitative determination of degradation products of C-terminal telopeptides of type II collagen (CTX-II)					
Sample Type	• Non-human urine or cartilage explant culture supernatant	RUO	AC-09F1	96 Wells	Research Use Only**
Sample Volume	• 10 µL				
Sensitivity	• 0.75 µg/L				
Unique Features	• Reflects cartilage degradation activity • Multi-species application				
Corticosterone EIA					
Assay for the quantitative determination of corticosterone					
Sample Type	Rat and mouse serum or plasma	RUO	AC-14F1	96 Wells	Research Use Only**
Sample Volume	30 µL				
Sensitivity	0.55 ng/mL				
Unique Features	• Non-extraction • A simple dilution step replaces tedious solvent extraction/evaporation				
Corticosterone HS (High Sensitivity) EIA					
Assay for the quantitative determination of corticosterone					
Sample Type	Serum or plasma	RUO	AC-15F1	96 Wells	Research Use Only**
Sample Volume	100 µL for duplicate determination				
Sensitivity	0.17 ng/mL				
Unique Features	• Multiple species application • Ideal tool for researchers investigating metabolic status and stress levels in various animal species				

Research Consumables

Bone Slices

For the *in vitro* assessment of osteoclastic bone resorption

Unique Features	• Cortical bone slices from the femur of bovine bones	RUO	DT-1BON 1000-96	50 Pieces	Research Use Only**

Dentine Discs

For use as bone resorption substrates

Unique Features	• 5mm diameter wafers of devitalised dentine	RUO	AE-8050	50 Discs	Research Use Only**

RUO - Research Use Only. IVD - *In Vitro* Diagnostic Use.
+ Ostase is a registered trademark of Hybritech Incorporated, a subsidiary of Beckman Coulter. Inc.

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