Urine Pre-Clinical CartiLaps®
ELISA

FOR RESEARCH USE ONLY

Cartilage Degradation Marker (CTX-II) For Preclinical Research

Animal models in arthritis
- Analyzing cartilage turnover
- Monitoring chondroprotective effects of drugs

Screening of chondroprotective drugs
- Objective assessment of *in vitro* cartilage degradation

The Urine Pre-Clinical CartiLaps® ELISA is used for quantitative assessment of cartilage degradation. The assay detects C-telopeptide fragments of collagen type II (CTX-II) generated during cartilage erosion in animal models and cartilage cultures.

X-ray by The Royal Veterinary and Agricultural University, Dept. of Clinical Studies

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Urine Pre-Clincial CartiLaps® ELISA	N-MID® Osteocalcin ELISA	ALPHA CrossLaps® ELISA	Rat-MID™ Osteocalcin ELISA	Urine CartiLaps® ELISA
RatLaps™ ELISA	Serum Pre-Clinical CartiLaps® ELISA	Serum CrossLaps® ELISA	Urine BETA CrossLaps® ELISA	CrossLaps® for Culture ELISA

Urine Pre-Clinical CartiLaps® ELISA

ENZYME IMMUNOASSAY FOR QUANTITATIVE
ASSESSMENT OF CARTILAGE DEGRADATION

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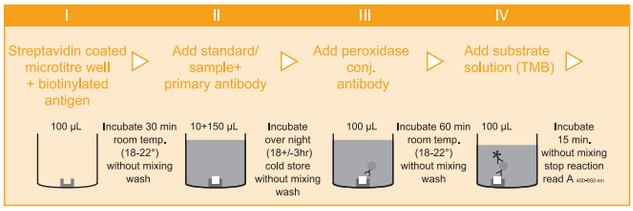

Performance Characteristics

Method:	• Competitive ELISA
Format:	• 96-well microplate with reagents sufficient to test 40 samples in duplicate
Detection limit:	• 0.75 µg/L
Analyte:	• A sequence (EKGPDP) specific for a part of the C-terminal telopeptide α1 chain of type II collagen (CTX-II)
Specimen:	• Urine
Specimen volume:	• 10 µl
Specimen CV intraassay:	• <5%
Specimen CV interassay:	• <9%
Species reactivity:	• Non-human primates, bovine, horses, pigs, rabbits, rats and mice

Sampling

Collect either spot urine or 24 hours urine. Freeze samples for prolonged storage (<18°C). Do not add HCl to urine samples.

The Urine Pre-Clinical CartiLaps® ELISA kit is for in vitro use only.
Product number #2CAL4000

Assay Procedure

1. Prior to use, prepare and equilibrate all solutions to room temperature.
2. Pre-dilute urine samples 1+3 in Standard A.
3. Pre-incubate by adding 100 µL Biotinylated Antigen to each well, cover with sealing tape, and incubate for 30±5 minutes at room temperature (18-22°C).
4. Wash the immunostrips 5 times manually with Washing Buffer diluted 1+50 in distilled water.
5. Pipette 10 µL of either Standards, Control, or unknown samples into appropriate wells followed by 150 µL Primary Antibody. Cover the immunostrips with sealing tape and incubate for 21±3 hours at 2-8°C.
6. Wash.
7. Add 100 µL Peroxidase-Conjugated Antibody solution to each well. Cover with immunostrips with sealing tape and incubate for 60±5 minutes in the dark at room temperature (18-22°C).
8. Wash
9. Pipette 100 µL of the Substrate Solution into each well and incubate for 15±2 minutes at room temperature (18-22°C) in the dark. Use sealing tape.
10. Pipette 100 µL of the Stopping Solution into each well.
11. Measure the absorbance at 450 nm with 650 nm as reference within two hours.

Species	Mean (95% CI)
Dog (study 1)	69.5 mg/mmolCr (4.1-260.4)
Dog (study 2)	666 mg/mmolCr (26.6-2132)
Guinea Pig (study 3)	43.9 mg/mmol Cr (1.1-231.2)
Guinea Pig (study 4)	388 mg/mmol Cr (57.4-840)
Rabbit (study 5)	41.9 mg/mmol Cr (7.6-114)
Rabbit (study 6)	625.2 mg/mmol Cr (60.8-1745)
Rat (study 7)	24.3 mg/mmol Cr (7.8-68.2)
Rat (study 8)	95.4 mg/mmol Cr (35.5-135)
Cell Culture Supernatant	69.8 mg/mmol Cr (2.0-237)

ISO 9001 certified

LITERATURE: **1.** CHRISTGAU, S. ET AL. MENOPAUSE (2004); 11:508-518. **2.** CHRISTGAU, S. ET AL. BONE (2001); 29: 209-215. **3.** HOEGH-ANDERSEN, P. ET AL. ANNALS OF RHEUM DIS. (2004); 6(2): R169-80. **4.** REIJMAN, M. ET AL. ARTHRITIS & RHEUM. (2004); 50:2471-2478. **5.** ROY-BEAUDRY, M. ARTHRITIS & RHEUM (2003); 48:2855-2864.

all the way

FROM RESEARCH TO PATIENT MONITORING

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