
Lab Dept: Chemistry

Test Name: C-TELOPEPTIDE, BETA-CROSS-LINKED, SERUM

General Information

Lab Order Codes: CTEL

Synonyms: B-Cross Laps; Beta-CTx; C-terminal collagen crosslinks; Carboxy terminal collagen crosslinks; Collagen Type I-C Telopeptide; Collagen C Telopeptide

CPT Codes: 82523 – Collagen cross links, any method

Test Includes: C-Telopeptide level reported in pg/mL

Logistics

Test Indications: Preferred test to measure bone resorption and monitor response to antiresorptive therapy (eg, bisphosphonates, hormone replacement therapy) in postmenopausal women and individuals with osteoporosis

Lab Testing Sections: Chemistry - Sendouts

Referred to: ARUP Laboratories (ARUP Test: 0070416)

Phone Numbers: MIN Lab: 612-813-62

STP Lab: 651-220-6550

Test Availability: Daily, 24 hours (setup Tuesday, Thursday, Saturday)

Turnaround Time: 1-4 days.

Special Instructions: For patients receiving therapy with high biotin doses (e.g. greater than 5 mg/day), specimen should not be drawn until at least 8 hours after the last biotin administration.

Specimen

Specimen Type: Blood

Container: Red, Marble, or Gold top. Green (Lithium Heparin is also acceptable)

Draw Volume: 3 mL (Minimum: 1.5 mL) blood

Processed Volume: 1 mL (Minimum: 0.5 mL) serum/plasma

Collection: Routine blood collection

Special Processing: Lab Staff: Allow serum separator tube to sit for 15-20 minutes at room temperature for proper clot formation. Centrifuge and separate serum or plasma from cells ASAP or within 2 hours of collection. Transfer 1 mL serum or plasma to an ARUP Standard Transport Tube. Store and ship at Frozen temperatures. Forward promptly.

After separation from cells: Ambient: 4 hours; Refrigerated: 8 hours; Frozen: 3 months

Sample Rejection: Mislabelled or unlabeled specimens; hemolyzed specimens

Interpretive

Reference Range:

Age	Female	Male
6 months-6 years	500-1800 pg/mL	500-1700 pg/mL
7-9 years	566-1690 pg/mL	522-1682 pg/mL
10-12 years	503-2077 pg/mL	553-2071 pg/mL
13-15 years	160-1590 pg/mL	485-2468 pg/mL
16-17 years	167-933 pg/mL	276-1546 pg/mL
18-29 years	64-640 pg/mL	87-1200 pg/mL
30-39 years	60-650 pg/mL	70-780 pg/mL
40-49 years	40-465 pg/mL	60-700 pg/mL
50-69 years		40-840 pg/mL
70 years or greater		52-847 pg/mL
Postmenopausal	104-1008 pg/mL	

Critical Values: N/A

Limitations:

- Baseline concentration of CTX must be established before treatment begins
- Intraindividual variability of CTX must be considered when interpreting test results, ie, diet, exercise, time of day
- May be significant overlap in CTX between individuals with and without osteoporosis
- Test results cannot be used to predict fractures
- CTX concentration may be higher than expected in individuals with reduced kidney function (reduced excretion of CTX)

Methodology: Quantitative Electrochemiluminescent Immunoassay

References: [ARUP Laboratories Web Page](#) (March 2020)