Lab Dept:  Chemistry  
Test Name:  PROINSULIN, PLASMA  

**General Information**  
Lab Order Codes:  PROIN  
Synonyms:  Insulinoma  
CPT Codes:  84206 - Proinsulin  
Test Includes:  Proinsulin level reported in pmol/L.  

**Logistics**  
Test Indications:  As part of the diagnostic workup of suspected insulinoma, PC1/3 deficiency, or with suspected proinsulin mutations.  
Lab Testing Sections:  Chemistry - Sendouts  
Referred to:  Mayo Medical Laboratories (MML Test: PINS)  
Phone Numbers:  MIN Lab: 612-813-6280  
               STP Lab: 651-220-6550  
Test Availability:  Daily, 24 hours  
Turnaround Time:  2 – 7 days, performed Monday and Thursday  
Special Instructions:  See special container, collection procedure and patient preparation.  

**Specimen**  
Specimen Type:  Blood  
Container:  Ice cooled Lavender top (EDTA) tube  
Draw Volume:  4.5 mL (Minimum: 3 mL) blood  
Processed Volume:  1.5 mL (Minimum: 1 mL) plasma  
Collection:  Routine blood collection. Draw blood into an ice cooled lavender top tube from a fasting patient. After draw, chill the whole blood on ice for at least 10 minutes before processing.
**Special Processing:** Lab Staff: Centrifuge specimen after the specimen has been on ice for at least 10 minutes in a refrigerated centrifuge. Remove plasma into a screw-capped plastic vial. Store and ship and frozen temperatures.

**Patient Preparation:** Fasting specimen preferred

**Sample Rejection:** Gross hemolysis; mislabeled or unlabeled specimens

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**Interpretive**

**Reference Range:** 3 – 20 pmol/L

**Critical Values:** N/A

**Limitations:** To avoid misdiagnosis, all proinsulin measurements used in the diagnostic workup of patients with hypoglycemia must be interpreted in the context of coexisting illnesses, the blood glucose concentration at the time of sampling, and other test results (i.e., insulin, C-peptide, beta-hydroxybutyrate, and sulfonylurea drug screen). For example, patients with chronic renal failure or type 2 diabetes mellitus can have increased proinsulin, C-peptide and insulin values, but usually without suppressed (<45 g/dL) blood glucose.

**Methodology:** Immunochemiluminescent Assay

**References:** [Mayo Medical Laboratories](https://www.mayoclinic.org) February 2018