T3, Reverse, LC/MS/MS

CPT Code: 84482
Order Code: 90963
ABN Requirement: No
Synonyms: RT3; rT3; Reverse T3; Reverse Triiodothyronine
Specimen:
Preferred: serum
Acceptable: plasma
Volume: 0.5 mL
Minimum Volume: 0.3 mL
Container:
Preferred: R, red-top tube (no gel)
Acceptable: SS, serum separator tube, red-top, L, lavender-top tube, EDTA or Gn, green-top tube, sodium heparin

Collection:
Serum: Allow blood to clot at room temperature for 30 minutes. Centrifuge to separate serum from the cells within 24 hours of collection and immediately pour serum into a plastic transport tube.

Plasma: Centrifuge to separate plasma from the cells within 24 hours of collection and immediately pour plasma into a plastic transport tube.

Note: If a Serum Separator Tube (SST) is used for specimen collection, serum must be separated from the original SST tube and aliquoted into transport tube labeled "SST serum."

EDTA Plasma:

1. Draw and gently invert 8 to 10 times.
2. Centrifuge for 10 minutes.
3. Pre-squeeze transfer pipet bulb and draw off approximately 2/3 of the upper plasma layer.
   Note: *This ensures that the buffy coat and red cells remain undisturbed.*
4. Aliquot plasma into labeled transport tube labeled as "EDTA plasma" and cap tightly. Discard original tube.

Transport: Store sample at 2°C to 8°C after collection and ship the same day per packaging instructions included with the provided shipping box.

Stability:

Ambient (15-25°C): 7 days
Refrigerated (2-8°C): 7 days
Frozen (-20°C): 30 days

Causes for Rejection: Unseparated serum (>48 hours on clot); serum not separated from the SST gel barrier within 24 hours

Methodology: Liquid Chromatography/Tandem Mass Spectrometry (LC/MS/MS)

Turn Around Time: 5 to 6 days

Reference Range:

Age	ng/dL
All Ages	8-25

Clinical Significance: T_3 Reverse, LC/MS/MS – 3,3′,5′-Triiodothyronine (reverse T3, rT3) is, along with 3,3,5′-Triiodothyronine (T3) a deiodinated metabolite of thyroxine (T4), the major secretory product of the thyroid gland and is secreted into the bloodstream. Unlike T3, however, rT3 is thought to be metabolically inert.

The process of 5′-monodeiodination that converts T4 to T3, and rT3 to diiodothyronine is inhibited in a wide variety of conditions, collectively referred to as nonthyroidal illnesses (NTI) or the 'euthyroid sick' state. These conditions include fasting, malnutrition, poorly controlled diabetes mellitus, trauma, surgery, and systemic illness. Consequently, in patients with NTI the serum T3 level typically decreases, and the rT3 often, but not always, increases.

The CPT codes provided are based on AMA guidelines and are for informational purposes only. CPT coding is the sole responsibility of the billing party. Please direct any questions regarding coding to the payer being billed.