

FREE T3,
PLASMA
/SERUM

Orderable – FT₃

Turn Around Time: 4 hours

Alternate Name(s):

Free Triiodothyronine
FT3

Specimen:

| Adult | Pediatric |
|---|---|
| 4.5 mL Light Green top Vacutainer tube | 0-2 years: 0.5 mL Light Green top Microtainer 2-10 years: 3 mL Light Green top Vacutainer tube |
| Red, Gold, or Lavender (EDTA) top tubes are also acceptable | |

Collection Information:

Minimum volume of plasma or serum required is 700 µL for adult samples or 200 µL for pediatric samples.

Reference Ranges:

| Age | Range |
|-----------------------------------|------------------|
| 0 - 6 days: | 2.7 - 9.7 pmol/L |
| 6 days - 3 months: | 3.0 - 9.3 pmol/L |
| 3 - 12 months | 3.3 - 9.0 pmol/L |
| 1 - 6 years: | 3.7 - 8.5 pmol/L |
| 6 - 11 years: | 3.9 - 8.0 pmol/L |
| 11 - 20 years: | 3.9 - 7.7 pmol/L |
| > 20 years: | 3.1 - 6.8 pmol/L |
| Non-thyroidal illness: | 1.3 - 6.3 pmol/L |
| First Trimester of Pregnancy: | 3.8 - 6.0 pmol/L |
| Second Trimester of Pregnancy: | 3.2 - 5.5 pmol/L |
| Third Trimester of Pregnancy: | 3.1 - 5.0 pmol/L |



Laboratory:
Core Lab



Requisition:
GENERAL LABORATORY
REQUISITION



Method of Analysis:
Roche
Electrochemiluminescence



Test Schedule:
As required



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Comments:

TSH should be the initial test to screen for clinically-suspected hypothyroidism or hyperthyroidism. If TSH is below the lower cut-off, FT4 and FT3 testing will be performed reflexively by the laboratory. If TSH is between the lower and upper cut-offs, no FT4 or FT3 testing will be performed reflexively. If TSH is above the upper cut-off, FT4 testing will be performed reflexively by the laboratory. These cut-offs are the TSH reference intervals in children and the optimal cut-offs to predict abnormal FT4 levels in adults.

The TSH cut-offs are:

2 – <6 years: <0.70 or >5.97 mIU/L

6 – <11 years: <0.60 or >4.84 mIU/L

11 – <18 years: <0.51 or >4.30 mIU/L

≥18 years: <0.58 or >6.30 mIU/L

FT3 and/or FT4 testing should only be ordered directly for patients:

- With known or suspected pituitary/hypothalamic disease
- Being treated for primary hyperthyroidism, severe hyperthyroidism (thyroid storm), or severe hypothyroidism (myxedema coma)
- With resistance to thyroid hormones
- Treated with lithium carbonate, an anticonvulsant, or amiodarone
- Who are pregnant
- Under 2 years of age

Furosemide may cause elevated free T3 results.

Biotin may interfere with this test. Samples should not be taken from patients receiving high biotin doses (i.e. > 5 mg/day) until at least 8 hours after the last biotin administration.