Thyrotropin-releasing Hormone (TRH) 36588X

Clinical Use
• Potential marker for TRH-secreting tumors

Reference Range
<5 pg/mL

Interpretive Information
• After TRH injection
• Fetus and newborn
• Ectopic (extrahypothalamic) production
• Primary hypothyroidism (variable)

Clinical Background
Thyrotropin-releasing hormone (TRH) is a tripeptide produced in the hypothalamus, other central nervous system sites, and the gastrointestinal tract, especially the pancreas. TRH stimulates TSH synthesis and release. Most circulating TRH, which is rapidly degraded, is probably derived from extra-hypothalamic tissues. Circulating TRH levels are increased in fetal and neonatal serum because of increased TRH production from fetal gut tissues and placenta and low levels of TRH-degrading activity in fetal blood. Plasma TRH levels have not been shown to be useful in diagnosis of any known thyroid condition.

Method
• Radioimmunoassay (RIA)
• Analytical sensitivity: 5 pg/mL

Specimen Requirements
2 mL frozen plasma
0.6 mL minimum

Collect blood in syringe or red-top tube and immediately transfer to a cold, special Nichols Institute PTH-RP collection tube; mix thoroughly. Centrifuge in refrigerated centrifuge. Transfer plasma to a plastic tube and freeze.