

Reporting Title: Beta-HCG, Quantitative, S
Performing Location: Mayo Clinic Jacksonville Clinical Lab

Ordering Guidance:
If human chorionic gonadotropin (hCG) during pregnancy is indicated, order THCG / Human Chorionic Gonadotropin (hCG), Quantitative, Pregnancy, Serum.

If hCG testing requested on cerebrospinal fluid specimens to aid in the diagnosis of brain metastases of testicular cancer or extragonadal intracerebral germ cell tumors, order BHSF / Beta-Human Chorionic Gonadotropin, Quantitative, Spinal Fluid.

Specimen Requirements:
Patient Preparation: For 12 hours before specimen collection, patient **should not** take multivitamins or dietary supplements (eg, hair, skin, and nail supplements) containing biotin (vitamin B7).
Supplies: Sarstedt Aliquot Tube, 5 mL (T914)
Collection Container/Tube:
Preferred: Serum gel
Acceptable: Red top
Submission Container/Tube: Plastic vial
Specimen Volume: 1 mL
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Forms:
If not ordering electronically, complete, print, and send an [Oncology Test Request](#) (T729) with the specimen.

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	
	Ambient	7 days	
	Frozen	90 days	

Result Codes:

Result ID	Reporting Name	Type	Unit	LOINC®
BHCG	Beta-HCG, Quantitative, S	Numeric	IU/L	21198-7

LOINC® and CPT codes are provided by the performing laboratory.

Supplemental Report:
No

CPT Code Information:
84702

Reference Values:

Children(1,2)

Males

Birth-3 months: < or =50 IU/L*

>3 months-<18 years: <1.4 IU/L

Females

Birth-3 months: < or =50 IU/L*

>3 months-<18 years: <1.0 IU/L

*Human chorionic gonadotropin (hCG), produced in the placenta, partially passes the placental barrier. Newborn serum beta-hCG concentrations are approximately 1/400th of the corresponding maternal serum concentrations, resulting in neonate beta-hCG levels of 10-50 IU/L at birth. Clearance half-life is approximately 2 to 3 days. Therefore, by 3 months of age, levels comparable to adults should be reached.

Adults (97.5th percentile)

Males: <1.4 IU/L

Females

Premenopausal, nonpregnant: <1.0 IU/L

Postmenopausal: <7.0 IU/L

Pediatric reference values based on:

1. Chen RJ, Huang SC, Chow SN, Hsieh CY. Human chorionic gonadotropin pattern in maternal circulation. Amniotic fluid and fetal circulation in late pregnancy. J Reprod Med. 1993;38(2):151-154
2. Schneider DT, Calaminus G, Göbel U. Diagnostic value of alpha 1-fetoprotein and beta-human chorionic gonadotropin in infancy and childhood. Pediatr Hematol Oncol. 2001;18(1):11-26