

HCG-Beta (serum)	
Description	HCG is composed of two glycoprotein subunits, α and β . The β HCG assay measures both the intact HCG molecule and the free β HCG molecule. HCG is a hormone produced by the normal placenta, reaching a maximum concentration in serum by the eighth week of pregnancy. HCG can be detected in the plasma and urine as early as one week after conception.
Indication	<p>Malignancies with elevated concentrations:</p> <ol style="list-style-type: none"> a. Virtually all patients with gestational trophoblastic disease (molar pregnancy, choreocarcinoma) b. Non-seminomatous germ cell tumours of the testis (40-60%) and ovary. c. Testicular seminomas (20%) <p>Benign disease with elevated levels: Ectopic pregnancy, pituitary adenoma</p>
Additional Info	See Interpretation
Concurrent Tests	N/A
Dietary Requirements	N/A
Interpretation	<ol style="list-style-type: none"> a. Diagnosis of suspected ectopic pregnancy. If the concentration of βHCG is $>1000\text{U/l}$ but an intrauterine sac cannot be visualised on transvaginal ultrasound, ectopic pregnancy is likely. Also, plasma βHCG concentrations double every two days in normal pregnancy, but the rate of rise in ectopic pregnancy is usually less. b. Monitoring patients with gestational trophoblastic disease. Patients who have had a hydatidiform mole treated by uterine curettage are at risk of developing choriocarcinoma if the resection is incomplete. βHCG is an extremely sensitive tumour marker; tumours weighing only 1mg may be detectable. Should a tumour develop, βHCG may be used as an indicator of the response to treatment and in long-term follow up. c. Determining prognosis and monitoring non-seminomatous germ cell tumours. Used in conjunction with AFP. d. As a diagnostic aid for non-seminomatous germ cell tumours. However, while elevated levels are found in 40-60% of patients with metastatic non-seminomatous germ cell tumours, levels are rarely increased in those with stage 1 disease.
Collection Conditions	N/A
Frequency of testing	As required