Erythropoietin

Synonyms	EPO, Haematopoietin
Clinical Indication	Erythropoietin (EPO) is a glycoprotein hormone produced mainly by the kidneys. EPO is the primary regulator of erythropoiesis (red blood cell production) by stimulating the proliferation and differentiation of erythroid precursor cells in bone marrow. EPO adjusts red blood cell production to meet the tissue oxygen demand. Measurement of EPO may be used as an aid in the diagnosis of anaemias and polycythemias. Primary anaemias e.g. Those caused by low iron, low kidney blood flow and haemoglobinopathies give an appropriately elevated EPO level. Conversely, anaemias can also be secondary to under production of EPO as in end-stage renal disease. Measurement also useful for the differential diagnosis of polycythaemia (over production of red blood cells). Primary polycythemias e.g. due to an abnormality of the bone marrow are characterised by low EPO levels. Secondary polycythaemias as caused by hypoxic (low oxygen) diseases e.g. COPD and cardiac disease are characterized by raised EPO levels which lead to increased red cell mass. EPO is used to treat anaemia in chronic kidney disease.
Part of Profile / See Also	
Request Form	Combined Pathology manual Blood form or ICE request
Availability / Frequency of Analysis	On request
Turnaround Time	One week
Patient Preparation	
Sample Requirements	
Specimen Type	Serum (preferred) or lithium heparin
Volume	2mL
Container	 Gold-top (SST) tube (**preferred**) Or  Green-top (lithium heparin) tube Plain serum samples may also be used

Reference Range & Units	4.3 - 29 IU/L
Interferences	
Interpretation & Clinical Decision Value (if applicable)	Patients suffering from most anaemias will present with higher than normal concentrations of serum erythropoietin; whereas, those suffering from anaemia associated with chronic renal failure may have values within the normal range. **Interpretative comments are added to reports.**
References	
Test code	ERYT
Lab Handling	Aliquot and store at -20°C.