



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

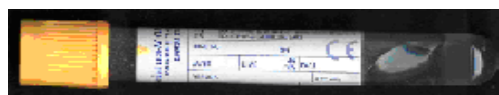
Specimen Type

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

2.6 – 18.5 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.

References

Beckman erythropoietin kit insert

Test code

ERYT

Lab Handling

Aliquot and store at -20°C. Run Monday - Saturday at the hub laboratory.