

## Erythropoietin (Plasma)

<b>Description</b>	Erythropoietin (EPO) is a glycoprotein hormone that is the primary stimulus to erythropoiesis. It is produced by the kidney and to a lesser degree by the liver.
<b>Indication</b>	<ol style="list-style-type: none"> <li>1. Differential diagnosis of anaemia.</li> <li>2. Differentiation between primary and secondary Polycythaemia.</li> <li>3. Monitoring erythropoietin therapy.</li> </ol>
<b>Additional Info</b>	Most anaemic patients have appropriately elevated serum EPO which is dependent on the degree and type of anaemia. Aplastic anaemia, haemolytic anaemia, and anaemia due to iron deficiency result in increased levels of EPO. The EPO concentration in patients with anaemia associated with chronic kidney disease or multiple myeloma is inappropriately low due to reduced production, while in non-renal causes of anaemia, the hormone is normal.
<b>Concurrent Tests</b>	State all clinical information including if the patient is on recombinant EPO treatment and the current Hb level.
<b>Dietary Requirements</b>	N/A
<b>Interpretation</b>	<p>Patients with polycythaemia rubra vera (PRV) typically present with EPO concentrations at the lower end of the normal reference range or suppressed plasma EPO, whereas patients with secondary polycythaemia present with EPO concentrations at the upper end of the normal reference range or raised plasma EPO.</p> <p>This test is rarely needed in practice.</p>
<b>Collection Conditions</b>	Lithium heparin sample taken at least 48 hrs after receiving recombinant erythropoietin therapy.
<b>Frequency of testing</b>	N/A