

## Ferritin

**Analyte:** Ferritin

**Specimen Type:** Serum, Inquire for additional option(s)

**Optimum Volume:** 0.5 mL

**Stability:**

2-8 Degrees C	-20 Degrees C	-70 Degrees C
8 days	1 year	1 year

**Reporting Units:** ug/L

**Method:** Immunoturbidimetric

**Biological or Clinical Significance:**

Ferritin is protein that has a central role in the storage of iron. It has a molecular weight of  $\geq 440000$  Daltons, depending upon the iron content, and consists of a protein shell (apoferritin) of 24 subunits and an iron core containing an average of approximately 2,500  $Fe^{3+}$  ions (in the basic isoforms).

Ferritin is an acute-phase respondent, and so individuals with conditions association with an inflammatory response may have elevated serum ferritin levels that are not directly related iron stores.

The determination of ferritin is useful in diagnosis of defects in iron metabolism, monitoring iron therapy, ascertaining the iron reserves in groups at risk and in the differential diagnosis of anemias. Diagnostic use of serum ferritin encompasses prelatent and latent iron deficiency as well as iron overloading. It is also used to distinguish between hypoferric anemia and hypochromic anemia (chronic infection and tumor anemias, sideroblastic anemia or thalassemia). Ferritin determinations are widely used for monitoring renal anemia when iron utilization and distribution disorders are present during therapy with erythropoietin. The ferritin detectable in blood is in equilibrium with the body's depot iron and hence acts as an indicator for the level of the iron stores.

**Principle of Test Method:**

The ferritin assay is an automated immunoturbidimetric method.

**References:**

1. Cook JD, Flowers CH, Skikne BS. The quantitative assessment of body iron. *Blood* 2003; 101:3359-3363.
2. Thomas C, Thomas L. Biochemical markers and hematologic indices in the diagnosis of functional iron deficiency. *Clin Chem* 2002; 48:1066-1076.