

## Division of Laboratory Medicine

Immunology

### Free Light Chains

#### General information

This test measures immunoglobulin light chains not incorporated into intact immunoglobulin molecules. Serum levels are increased when production is increased (myeloma) or excretion is impaired (renal failure)

**Specimen transport:** At room temperature

**Repeat frequency:** Initial diagnosis, post treatment monitoring for suspected relapse

**Special precautions:** Should be measured alongside immunoglobulins and electrophoresis

#### Laboratory information

**Normal reference range:**

- Ratio 0.26-1.65
- Free  $\kappa$  = 3.30-19.40 mg/L
- Free  $\lambda$  = 5.71-26.30 mg/L

**Volume and sample type:** 7ml serum

**Method:** Turbidimetry

**Turnaround time (calendar days from sample receipt to authorised result):** Median - 3

**Participation in EQA Scheme:** UK NEQAS for Monoclonal Protein identification and Binding Site Serum Paraprotein Scheme

#### Clinical information

**Indications for the test:** May be used as part of the diagnostic strategy for myeloma. This test has largely superseded Bence Jones protein (urine immunofixation).  
Monitoring in some cases of myeloma.

**Factors affecting the test:** Antigen excess can cause falsely low serum FLC results. Some monoclonal light chains (particularly  $\kappa$  FLC) do not dilute in a linear fashion and may be underestimated.

**(Last updated June 2022)**