

Patient Name : Demo Patient Name
Age / Sex : 77 Y / M
Referred By : DEMO HOSPITAL
Centre : HOD Head Office

Lab No : Demo Visit No
Registration On : 21-Jan-25 07:40
Patient ID : UHID.DEMO.001

Kappa Lambda Free Light Chain Assay				Serum Sample
Accession No: DEMO_BARCODE		Collected On: 21-Jan-25 08:02	Received On: 21-Jan-25 12:01	Approved On: 21-Jan-25 20:04
Observation	Result	Unit	Biological Ref. Interval	Method
Kappa, Free light chain	10.88	mg/L	2.3-20.7	Nephelometry
Lambda, Free light chain	72.46	mg/L	4.2-27.6	Nephelometry
Kappa/Lambda Ratio	0.15	Ratio	0.22-1.74	Calculated

Kappa	Lambda	Kappa Lambda Ratio	Remarks
Normal	Normal	Normal	Normal sample. If serum electrophoresis pattern is also normal, it is unlikely that patient has Monoclonal gammopathy.
Normal	Normal	Low/High	Suggestive of Monoclonal gammopathy with Bone Marrow suppression
Low	Low	Normal	Suggestive of Bone Marrow suppression
Low	Low	Low/High	Suggestive of Monoclonal gammopathy with Bone Marrow suppression
High	High	Normal	Suggestive of : a. Renal Impairment b. Overproduction of Polyclonal free light chain from inflammatory conditions c. Bclonal gammopathy of different free light chain types
High	High	Low/High	Suggestive of Monoclonal gammopathy with Renal Impairment

Comments
 Measurement of free light chain (FLCs) aids in the diagnosis & monitoring of Multiple myeloma, Waldenstrom's macroglobulinemia, AL Amyloidosis & Light chain deposition disease. Serum concentration of FLCs is dependent upon the balance between production by plasma cells & their progenitors and renal clearance. When there is increased polyclonal immunoglobulin production and/or renal impairment, concentration of both kappa & lambda light chains can increase by 30-40 fold but the Kappa / Lambda ratio remains unchanged. In contrast, tumor produces monoclonal excess of only 1 type of light chains, often with bone marrow suppression of alternate light chains resulting in abnormal kappa/lambda ratio. The combination of Serum protein electrophoresis (SPE) & Immunofixation (IFE) are highly sensitive but fail to identify a few patients with Light Chain Multiple Myeloma & all patients of Non Secretory Multiple Myeloma. Combination of free light chain assay with SPE & IFE improves the sensitivity to 99%.

Advise: Please correlate results clinically.



This is a Demo Signature
 and the doctor's signature should appear here

In case of any unexpected or alarming results, please contact us immediately for re-confirmation, clarifications, and rectifications, if needed.

