



**Freelite™**  
Serum Free  
Light Chain Assay

## Monitoring Treatment & Disease

**Monitor more patients accurately and easily**

*Freelite offers a sensitive indicator of patient status in treatment and remission of Multiple Myeloma and AL amyloidosis.*



# Monitor more patients accurately and easily.

*Freelite offers a sensitive indicator of patient status in treatment and remission of Multiple Myeloma and AL amyloidosis.*

*Freelite provides a rapid, quantifiable measure of serum free light chains to aid laboratory diagnosis and monitoring of monoclonal disease states.*

## Confidence

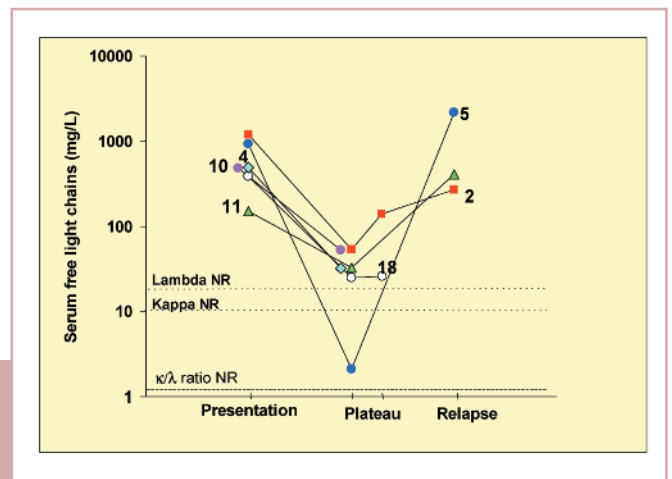
Confidently use **Freelite** for monitoring your Multiple Myeloma and AL amyloidosis patients.

- Free light chains have a half-life of just 2-6 hours in serum and can be used confidently as a rapid indicator of response to treatment.
- **Freelite** is highly specific and sensitive for serum kappa and lambda free light chains.
- The sensitivity of **Freelite** assays is much greater than currently available urine assays.
- **Freelite** enables you to identify the status of patients even if a different monoclonal protein is produced in relapse.

## Nonsecretory Multiple Myeloma (NSMM)<sup>1</sup>

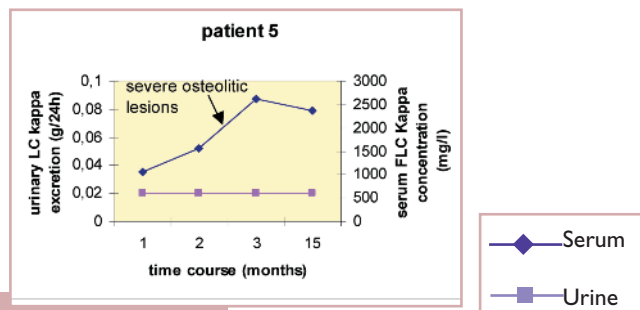
**Freelite** detected abnormal serum free light chains in 82% of patients previously classified as non secretors by conventional methods. The sensitivity of **Freelite** can help to detect and monitor these patients effectively.

*Changes in serum free light chain concentrations and clinical status in 6 patients with Nonsecretory Myeloma. NR=upper limit of normal ranges*

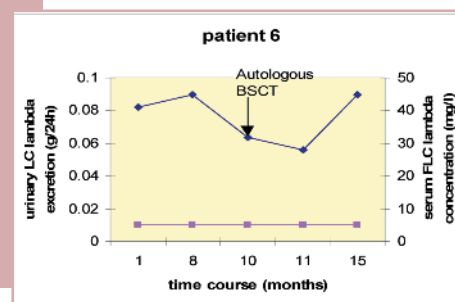


## Light Chain Multiple Myeloma (LCMM)<sup>2,3</sup>

The serum **Freelite** assay is sensitive enough for correlation with clinical events and is more sensitive than urine results.



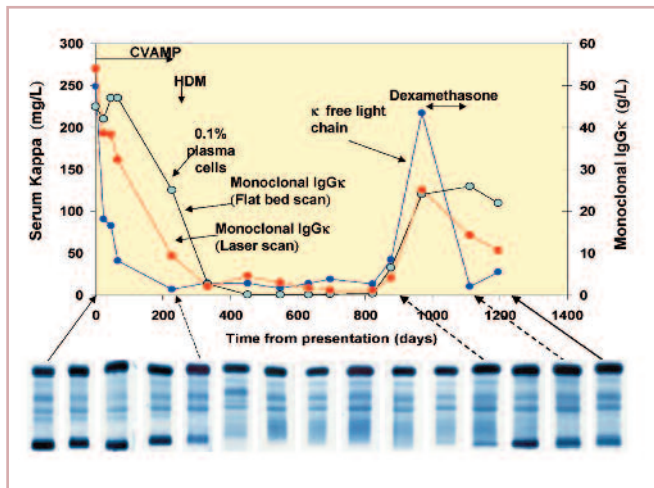
*Alyanakian et al. concluded, "Immunonephelometric measurement of serum free light chains are a reliable method for follow up of patients with light chain secreting monoclonal gammopathies". Also that for cases featuring hardly measurable amounts of light chain in the urine "... the serum free light chain assay proved sensitive enough for correlation with clinical events."*



## Intact Immunoglobulin Multiple Myeloma<sup>4</sup>

Measurement of serum free light chains with **Freelite** has shown that 96% of patients with Intact Immunoglobulin Multiple Myeloma have an abnormal light chain concentration or abnormal kappa/lambda ratios.

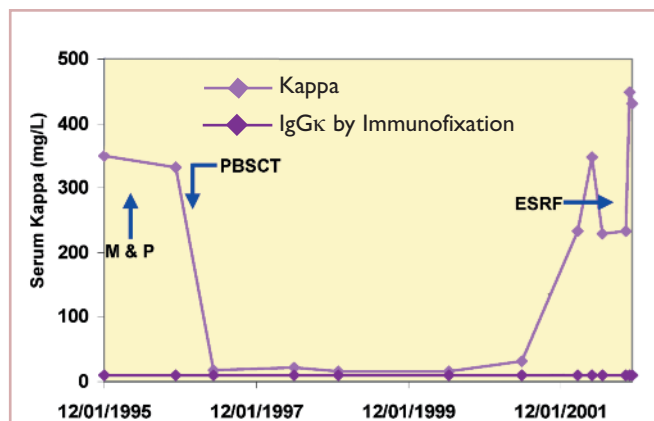
**Freelite** provides sensitive analysis and is a more accurate, faster marker of tumour kill than intact immunoglobulin.



Monitoring of a myeloma patient using IgK $\kappa$  and free  $\kappa$ . Electrophoresis gels are shown for each sample.

## AL Amyloidosis<sup>5,6,7</sup>

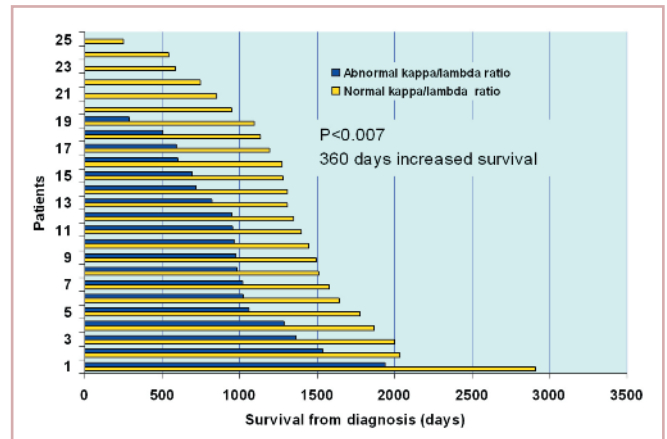
Measurement of serum free light chains with **Freelite** has been shown to follow clearly the course of disease whilst the monoclonal IgG kappa, detectable by immunofixation electrophoresis, remained unchanged.<sup>8</sup>



Changes in serum monoclonal proteins during the disease course of a patient with AL amyloidosis. M&P: melphalan & prednisolone; PBSCT: peripheral blood stem cell autograft; ESRF: end stage renal failure

## Minimal Residual Disease<sup>8</sup>

Serum free light chain analysis identified residual disease in many patients with Multiple Myeloma who were in complete remission by standard tests. Abnormal  $\kappa/\lambda$  ratios of patients in complete remission predicted earlier relapse and this has been shown to equate to a longer survival time of approximately one year.



Improved survival of 25 patients with Multiple Myeloma who had complete remission by both immunofixation electrophoresis and serum free light chain tests.

## Peace of Mind

- **Freelite** is a sensitive marker of residual disease.
- **Freelite** enables earlier identification of plateau stage.
- **Freelite** provides early indication of resistance to treatment.
- **Freelite** helps minimise patients' exposure to chemotherapy.
- **Freelite** assay time is less than 20 minutes, facilitating rapid clinical decisions.

## Ordering information

Analyser	Description	Pack	Code
Dade Behring BN™II	Freelite Kappa Kit	2 x 50 test	LK016.T
	Freelite Lambda Kit	2 x 50 test	LK018.T
Dade Behring BN ProSpec®	Freelite Kappa Kit	2 x 50 test	LK016.P
	Freelite Lambda Kit	2 x 50 test	LK018.P
Beckman Coulter IMMAGE®	Freelite Kappa Kit	2 x 50 test	LK016.IM
	Freelite Lambda Kit	2 x 50 test	LK018.IM
Roche Hitachi 911/912/917/P module	Freelite Kappa Kit	2 x 50 test	LK016.H
	Freelite Lambda Kit	2 x 50 test	LK018.H
Olympus AU400/640/2700/5400	Freelite Kappa Kit	2 x 50 test	LK016.AU
	Freelite Lambda Kit	2 x 50 test	LK018.AU

Protocols for other instruments are being developed so please contact us for the latest information.

## References

1. Drayson *et al.* Serum free light-chain measurements for identifying and monitoring patients with nonsecretory multiple myeloma. *Blood* 2001; **97**: 2900-2902
2. Bradwell *et al.* Serum test for assessment of patients with Bence Jones myeloma. *Lancet* 2003; **361**:489-491
3. Alyanakian M *et al.* Free Immunoglobulin Light-Chain Serum Levels in the Follow up of Patients With Monoclonal Gammopathies: Correlation with 24-hr Urinary Light Chain Excretion. *American Journal of Hematology* 2004;**75**:246-248
4. Mead *et al.* Serum free light chains for monitoring multiple myeloma. *British Journal of Haematology* 2004;**126**:348-354
5. Lachmann *et al.* Outcome in systemic AL amyloidosis in relation to changes in concentration of circulating free immunoglobulin light chains following chemotherapy. *British Journal of Haematology* 2003; **122**: 78-84
6. Roshini *et al.* Quantitative Analysis of Serum Free Light Chains, A New Marker for the Diagnostic Evaluation of Primary Systemic Amyloidosis. *American Journal of Clinical Pathology* 2003; **119**:274-278
7. United Kingdom Myeloma Forum. Guidelines on the diagnosis and management of AL amyloidosis. *British Journal of Haematology* 2004; **125**: 681-700
8. Serum Free Light Chain Analysis. A.R. Bradwell 2004

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Jan 2005  
MKG240.E

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