PID NO: P542000215346 Age: 73.0 Year(s) Sex: Female **Reference:**

Sample Collected At: DR VINAY KUMAR CHOPRA KOS Diagnostic Lab, 6349/I, Nicholson Road, Ambala Cantt, HRY 133001. Sample Processed At: Metropolis Healthcare Ltd E-21, B1 Mohan Co-op Ind Estate New Delhi-110044 VID: 54203150173243 Registered On: 03/12/2020 04:01 PM Collected On: 03/12/2020 4:01PM Reported On: 06/12/2020 02:30 PM

Immunofixation- Qualitative, Serum*

(Serum)

Investigation	Observed Value
<u>Electrophoretic Zone</u>	
IgG	<u>Present</u>
IgM	Absent
IgA	Absent
Карра	Present
Lambda	Absent
M-Band	<u>Present</u>
Impression	IgG Kappa

Interpretation:

542031501732

Bands in serum protein electrophoresis	Serum Immunofixation		Result
	Anti heavy chain antisera (IgG/ IgM/IgA)	Anti Light chain Kappa/Lambda	
Remark 1 1 band present	+	+	Presence of monoclonal
Remark 2 1 band present	-	+	1.Light chain disease,suggest urine Immunofixation 2.IgD or IgE disease 3.Multiple bands in lambda region indicates polymerised form
Remark 3 1 band present	+	-	Heavy chain disease.
Remark 4 Faint band present	Faint band	-	Cryoglobulin
Remark 5 2 band present	2 band with same or different anti-heavy chain sera	2 band with same different anti-light chain sera	 Biclonal gammopathy Paraprotein monomer/polymer of Immunoglobulins).

Reena

Dr. Reema Agrawal MD (Pathology)



PID NO: P542000215346 Age: 73.0 Year(s) Sex: Female



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Investigation	Observed Value	<u>Unit</u>	Biological Reference Interval
Immunofixation-qualitativeSerum			
SERUM, PROTEIN ELECTROPHORES	<u>IS</u>		
Total Protein (Biuret)	<u>8.5</u>		6.2-8.1
Serum Albumin	<u>2.78</u>	g/dL	3.57-5.42
Alpha 1 Globulin	0.22	g/dL	0.19-0.40
Alpha 2 Globulin	<u>0.41</u>	g/dL	0.45-0.96
Beta 1 Globulin	<u>0.72</u>	g/dL	0.30-0.59
Beta 2 Globulin	0.46	g/dL	0.20-0.53
Gamma Globulin	<u>3.91</u>	g/dL	0.71-1.54
Albumin, Globulin Ratio	<u>0.49</u>		1.1-2.2
"M" Band	<u>Present</u>		Absent
Comment	M-Band seen in Gamma	region.	

Reference:

Interpretation :

1. Serum protein electrophoresis is commonly used to identify multiple myeloma & related disorders.

2. Electrophoresis is a method of separating proteins based on their physical properties & the pattern is dependant on the fractions of 2 types of protein: Albumin & Globulin (alpha1, alpha2, beta & gamma).

Components	Major Components	Interferences
Albumin	Albumin	Lipoproteins, Drugs, Bilirubin, Radiological contrast
Alpha1 - globulins	α-1 antitrypsin, α-1 acid glycoprotein	-
Alpha2 - globulins	α-2 macroglobulin, haptoglobin	Haptoglobin - haemoglobin complex
Beta globulins	Transferrin, β-lipoprotein, IgA, IgM & sometimes IgG with complement proteins – C3 & C4	Fibrinogen
Gamma globulins	IgG, IgA, IgM,IgD, IgE	CRP

Keena

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Dr. Reema Agrawal MD (Pathology)

54203150173243

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Unit

Investigation

Observed Value

Biological Reference Interval

Direct detection at 200 nm in capillaries yields relative concentrations (percentages) of individual protein zones.

Remarks :

1. In following conditions serum Immunofixation is required to confirm monoclonal gammopathy or to differentiate monoclonal and polyclonal disorders.

Reference:

(A) A well defined 'M' band

(B) Non-discrete bands..

(C) Chronic inflammatory pattern (decreased Albumin, increased Alpha, increased Gamma region), which may mask the monoclonal band.

(D) Isolated increase in any region, with otherwise normal pattern.

2. SPE- Distortions/ Non-Discrete bands:

Distortions in Serum Protein Electrophoresis (SPE) usually affect curves of the gamma, beta, and alpha-2 peaks. Distortions are subtle, non-discrete bands which cannot be quantified & therefore not plotted on the graphs. These could be seen in the following situations:

a) Patients on therapy for Multiple myeloma.

b) Distortions at the point of sample application can be especially problematic when one is dealing with cryoglobulins (often precipitates at the origin).

c) Monoclonal gammopathies involving any of beta-migrating immunoglobulins (produce subtle distortion of the transferrin or C3 band)

d) Subtle distortions in the beta & gamma regions may indicate towards Ig D / Ig E gammaopathies.

Method : Capillary Electrophoresis

Keena

MD (Pathology)

Dr. Reema Agrawal

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Investigation

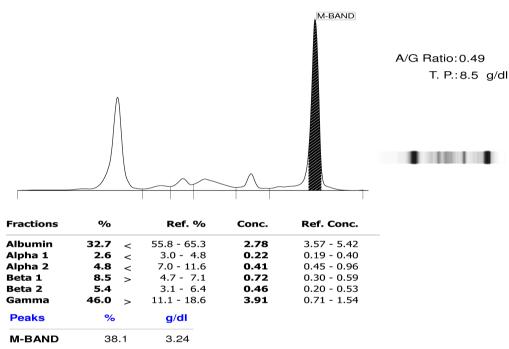
Observed Value

<u>Unit</u>

Biological Reference Interval

PROTEIN ELECTROPHORESIS

Name: MOHINDER KAUR Sample: 21 Sex: F Date: 12/4/2020 ID: 0210722625 Age :73



Signature

-- End of Report --

Keena

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Dr. Reema Agrawal MD (Pathology)