

Client
Gurugram

Pathkind Diagnostics Pvt. Ltd.

Plot No. 55-56, Udhog Vihar Ph-IV, Gurugram - 122015

Processed By

Pathkind Diagnostics Pvt. Ltd.

Plot No. 55-56, Udhog Vihar Ph-IV, Gurugram - 122015

Name	: Mr. PL151	Billing Date	: 07/07/2023 12:29:37
Age	: 45 Yrs	Sample Collected on	: 10/07/2023 10:01:31
Sex	: Male	Sample Received on	: 10/07/2023 11:02:13
P. ID No.	: P1000100012882	Report Released on	: 18/07/2023 20:26:28
Accession No	: 10002304938	Barcode No.	: 10002304938-01
Referring Doctor	: Self		
Referred By	:	Ref no.	:

Report Status - Final

Test Name	Result	Biological Ref. Interval	Unit
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BIOCHEMISTRY
Multiple Myeloma Panel
Immunotyping, Serum Qualitative

Sample: Serum

Protein Electrophoresis
Sample: Serum

Method: Method: Capillary Electrophoresis

Total Protein	8.9 H	6.4 - 8.3	g/dL
Sample: Serum			
Method: Spectrophotometry Biuret			
Albumin Fraction	3.67 L	3.97 - 4.95	g/dL
Sample: Serum			
Alfa 1 Globulin	0.33	0.21 - 0.35	g/dL
Sample: Serum			
Alfa 2 Globulin	0.78	0.51 - 0.85	g/dL
Sample: Serum			
Beta 1	0.69 H	0.34 - 0.52	g/dL
Sample: Serum			
Beta 2	0.54 H	0.23 - 0.47	g/dL
Sample: Serum			
Gamma Globulin	2.50 H	0.80 - 1.35	g/dL
Sample: Serum			
Myeloma Band	Not Detected	Not Detected	
Sample: Serum			
Beta-2-Microglobulin, Serum	1200.00	800.00 - 2400.00	ng/ml
Sample: Serum			
Method: Immunoturbidimetry			

KAPPA AND LAMBDA FREE LIGHT CHAINS

Kappa Free Light Chain	4.60	3.30 - 19.40	mg/L
Sample: Serum			
Method: Immunoturbidimetry			

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KAPPA AND LAMBDA FREE LIGHT CHAINS

Lambda Free Light Chain <i>Sample: Serum</i> <i>Method: Immunoturbidimetry</i>	28.00 H	5.71 - 26.30	mg/L
Kappa / Lambda Ratio <i>Sample: Serum</i> <i>Method: Immuno Nephelometry</i>	1.70 H	0.26 - 1.65	

SERUM IMMUNOGLOBULIN IgG, IgM, & IgA

Immunoglobulin G (IgG) <i>Sample: Serum</i> <i>Method: Immunoturbidimetric</i>	900.0	700.0 - 1600.0	mg/dL
Immunoglobulin M (IgM) <i>Sample: Serum</i> <i>Method: Immunoturbidimetry</i>	230.0	40.0 - 230.0	mg/dL
Immunoglobulin A (IgA) <i>Sample: Serum</i> <i>Method: Immunoturbidimetric</i>	465.0 H	70.0 - 400.0	mg/dL

Total Protein

Clinical Significance :

High levels of Serum Total Protein is seen in increased acute phase reactants in inflammation, late-stage liver disease, infections, multiple myeloma and other malignant paraproteinemias. Hypoproteinemia is seen in hypogammaglobulinemia, nephrotic syndrome and protein-losing enteropathy.

Albumin Fraction

Clinical Significance :

"Hypoalbuminemia can be caused by impaired synthesis due to liver disease (primary) or due to diminished protein intake (secondary), increased catabolism due to tissue damage and inflammation; malabsorption of amino acids; and increased renal excretion (eg, nephrotic syndrome). Hyperalbuminemia is seen in dehydration."

Protein Electrophoresis

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PROTEIN ELECTROPHORESIS INTERPRETATION

SERUM PROTEIN FRACTION	INCREASED	DECREASED
ALBUMIN	Severe dehydration	Malnutrition, cachexia, liver disease, protein losing enteropathies, nephrotic syndrome, severe burns, chronic infections, pregnancy.
ALPHA 1 GLOBULIN	Inflammatory states, pregnancy.	Alpha 1 antitrypsin deficiency
ALPHA 2 GLOBULIN	Inflammatory states, nephrotic syndrome, oral contraceptive usage, steroid usage, hyperthyroidism, adrenal insufficiency, advanced diabetes mellitus.	Haemolysis and haemolytic anaemias, liver disease, malnutrition, protein losing enteropathies, Wilson's disease.
BETA (BETA 1 AND BETA 2) GLOBULINS	Hyperlipidaemia, Iron deficiency anaemia, Biliary cirrhosis, Cushing's disease, sometimes in diabetes mellitus, hypothyroidism, malignant hypertension, nephrosis, polyarteritis nodosa, obstructive jaundice, third trimester of pregnancy.	Hypo beta lipoproteinemia, malnutrition.
GAMMA GLOBULIN	Monoclonal gammopathies like multiple myeloma, Waldenstrom macroglobulinemia, MGUS, POEMS syndrome, solitary plasmacytoma, Castleman disease, amyloidosis, heavy chain deposition disease, light chain deposition disease. Polyclonal gammopathies like cirrhosis, autoimmune or viral hepatitis, rheumatoid arthritis, SLE, Sjogren syndrome, scleroderma, osteomyelitis, endocarditis, HIV infection, EB virus infection, Non Hodgkin's lymphoma, CLL, Sick cell anaemia, Thalassemia, Cancers of liver, ovaries, lungs, GIT etc.	Agammaglobulinemia, hypogammaglobulinemia.

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Immunoglobulin G (IgG)
COMMENTS / INTERPRETATION :

- Immunoglobulins are formed by plasma cells as a humoral immune response to contact of the immune system with antigens.
- The primary reaction after the initial contact is the formation of antibodies of the IgM class followed later by IgG and also IgA antibodies.
- Levels of IgG are used in diagnosis of IgG myeloma, hereditary / acquired IgG immunodeficiencies and infectious diseases and immune status.

Immunoglobulin M (IgM)
COMMENTS / INTERPRETATION :

- Immunoglobulins are formed by plasma cells as a humoral immune response to contact of the immune system with antigens.
- The primary reaction after the initial contact is the formation of antibodies of the IgM class followed later by IgG and also IgA antibodies.
- Levels of IgM are useful in the diagnosis of hereditary and acquired IgM immunodeficiencies, Waldenstroms macroglobulinemia and earliest immunoglobulin serological diagnosis of infectious diseases.

Immunoglobulin A (IgA)

The human immunoglobulins (IgG, IgA, IgM, IgE and IgD) are a group of functionally and structurally closely related glycoproteins. Serum IgA is produced by plasma cells (B-Cells) and represent about 15% of all soluble immunoglobulins. IgA is the predominant immunoglobulin in body secretions like saliva, sweat, colostrums gastrointestinal and bronchial secretions and protects the skin and mucosa against micro-organism.

Polyclonal IgA increase is observed in severe infections, autoimmune disease, chronic liver disease and sarcoidosis. Monoclonal IgA increase is seen in IgA myeloma.

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Decreased IgA levels are seen in protein losing enteropathies, skin burns, congenital and acquired immunodeficiency diseases.

** End of Report**



Dr. Aarti Khanna Nagpal
DNB (Pathology)
Senior Consultant

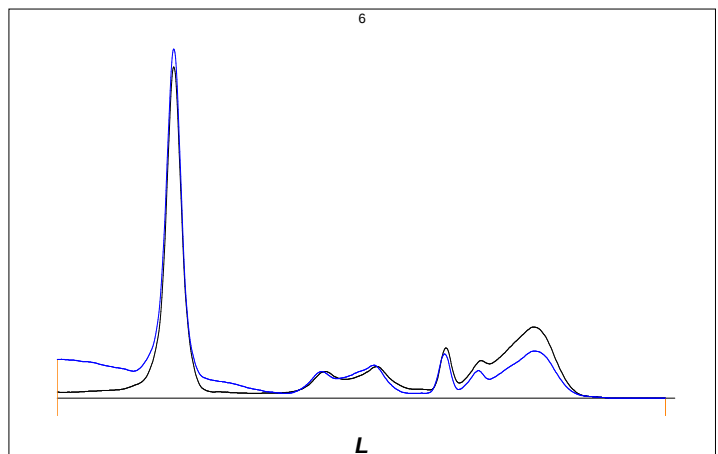
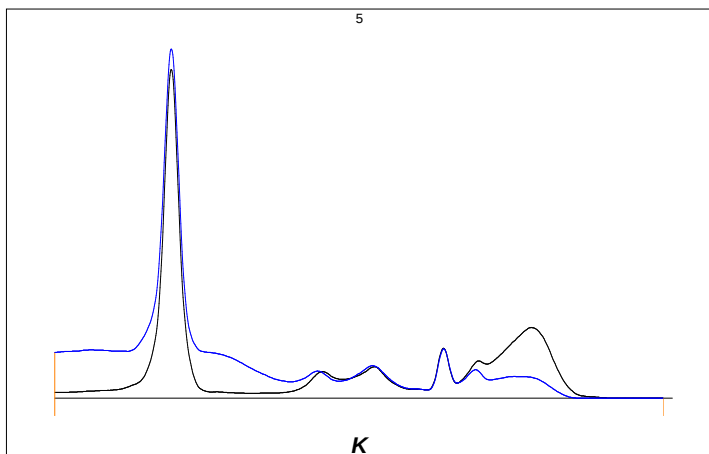
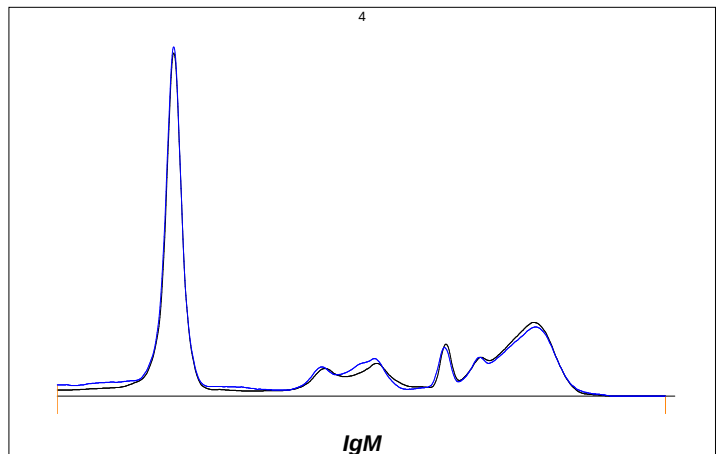
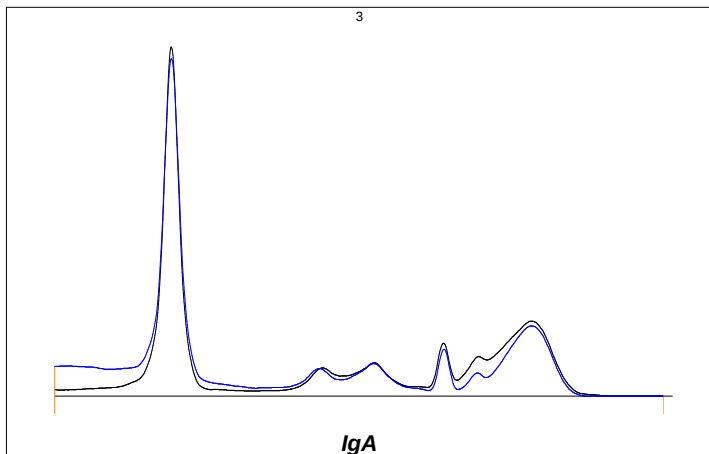
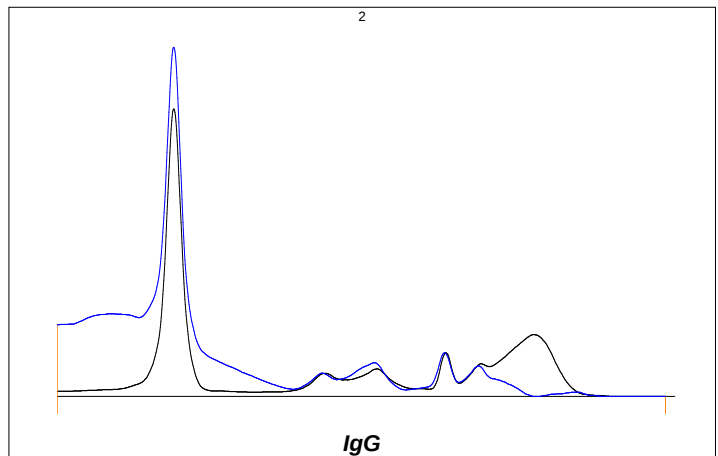
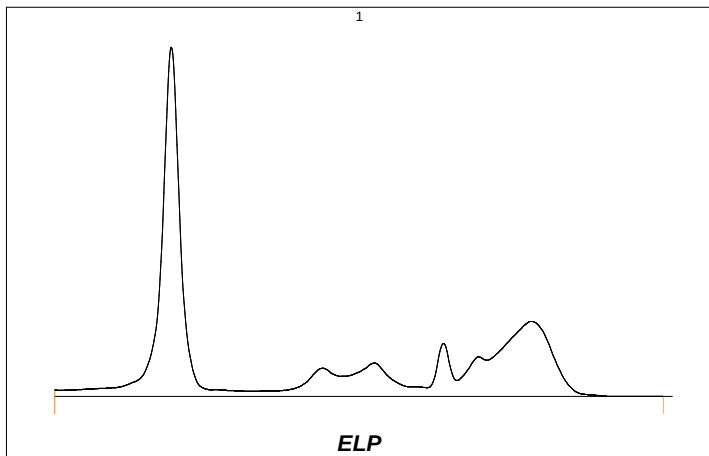


MR ARUN KUMAR PRADHAN

Date: 7/14/2023

ID: ?????

Depart.:



Signature

MR ARUN KR PRADHAN

ID: 997643840

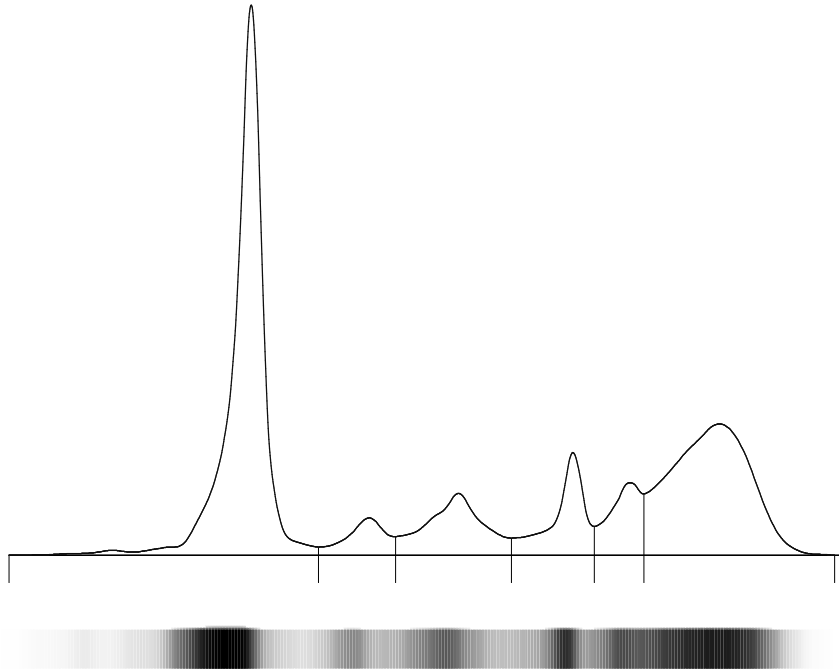
Sample #: 3

Date: 7/14/2023

Age: 53

Sex M

Serum protein electrophoresis



A/G Ratio: 0.76

T. P.: 8.51 g/dL

Fractions	%	Ref. %	g/dl	Ref. Conc.
Albumin	43.1	55.8 - 66.1	3.67 <	3.97 - 4.95
Alpha 1	3.9	2.9 - 4.9	0.33	0.21 - 0.35
Alpha 2	9.2	7.1 - 11.8	0.78	0.51 - 0.85
Beta 1	8.1	4.7 - 7.2	0.69 >	0.34 - 0.52
Beta 2	6.3	3.2 - 6.5	0.54 >	0.23 - 0.47
Gamma	29.4	11.1 - 18.8	2.50 >	0.80 - 1.35