

Immunoglobulins (IgG, IgA, IgM)

General information

Immunoglobulins are tested at ORC and Wythenshawe in Biochemistry under Immunology UKAS 8195 scope.

IgG: Marked polyclonal IgG elevation is seen in HIV, Sjögren's, and Sarcoidosis. Less marked elevation in chronic inflammatory and infective conditions.

IgA: raised in elderly, chronic infection, cirrhotic liver disease

IgM: raised primary biliary cirrhosis, acute infection, EBV, CMV, TB

Specimen transport: At room temperature

Repeat frequency: Not within six months - exempt for monitoring myeloma and immunodeficiency

Special precautions: None

Laboratory information

Normal reference range: Age specific (5th - 95th centiles)

Age specific reference ranges for total serum IgG, IgA and IgM (as recommended by Pathology Harmony)

Age	IgG g/L	IgA g/L	IgM g/L
Cord	5.2 - 18.0	<0.02	0.02 - 0.2
0-2 weeks	5.0 - 17.0	0.01 - 0.08	0.05 - 0.2
2-6 weeks	3.9 - 13.0	0.02 - 0.15	0.08 - 0.4
6-12 weeks	2.1 - 7.7	0.05 - 0.4	0.15 - 0.7
3-6 months	2.4 - 8.8	0.10 - 0.5	0.2 - 1.0
6-9 months	3.0 - 9.0	0.15 - 0.7	0.4 - 1.6
9-12 months	3.0 - 10.9	0.20 - 0.7	0.6 - 2.1
1-2 years	3.1 - 13.8	0.3 - 1.2	0.5 - 2.2
2-3 years	3.7 - 15.8	0.3 - 1.3	0.5 - 2.2
3-6 years	4.9 - 16.1	0.4 - 2.0	0.5 - 2.0
6-9 years	5.4 - 16.1	0.5 - 2.4	0.5 - 1.8
9-12 years	5.4 - 16.1	0.7 - 2.5	0.5 - 1.8
12-15 years	5.4 - 16.1	0.8 - 2.8	0.5 - 1.9
15-45 years	6.0 - 16.0	0.8 - 2.8	0.5 - 1.9
Over 45	6.0 - 16.0	0.8 - 4.0	0.5 - 2.0

Division of Laboratory Medicine

Immunology

Volume and sample type: 4ml serum

Method: Turbidimetry

Turnaround time (calendar days from sample receipt to authorised result): Median – 2

Participation in EQA Scheme: UK NEQAS Specific protein scheme & UK NEQAS for Monoclonal Protein identification

Clinical information

Indications for the test:

- Recurrent infections
- Suspected myeloma, Waldenstrom's macroglobulinaemia, lymphoma, connective tissue disease.

Factors affecting the test: Age (e.g. Transient neonatal hypogammaglobulinaemia), primary/secondary immunodeficiency, acute infections, treatment with immunosuppressive drugs, intravenous or subcutaneous immunoglobulin preparations.

(Last updated October 2024)