

Immunoglobulin Classes

Type	Structure	Total serum conc. of Ig	Characteristics	Functions
IgG	Monomer	70% of total Ig in serum	• Main antibody in secondary response • Only antibody which crosses placenta • protects fetus	• Neutralise bacterial toxins & viruses • opsonized bacteria, making them easier to phagocytose • Activates complements which enhances bae killing
IgA	Monomer or dimer	20% of total Ig in serum	• Major component of colostrum • Also occurs in saliva, tears & respiratory secretions	• Secretory IgA prevents attachment of bacteria & viruses to mucous membranes & prevents them from attaching • prevents attachment of foreign substances to the circulation
IgM	Monomer or pentamer	8-10% of total Ig in serum	• Main antibody in primary response to an antigen • produced by fetus	• Activates complement, promotes phagocytosis, & causes lysis of antigenic cells. • Antigen receptors on the surface of B-lymphocytes
IgD	Monomer	less than 1%	• Labile molecules. These facts have made the study of IgD difficult	• uncertain may function as an antigen receptors, no known antibody function
IgE	Monomer	Trace amounts 0.004%	• Binds mast cells & Basophils & leads to rupture of the cell membrane; degranulation & release histamine	• Anti allergic & antiparasitic. • Mediates immediate hypersensitivity • Defends against worm infection

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