

Human Immunoglobulin Properties

Property	IgG				IgA		IgM	IgD	IgE
H chain class (heavy chain)	γ				α		μ	δ	ε
H Chain Subclasses	γ1	γ2	γ3	γ4	α1	α2	None	None	None
H chain MW	50 kDa	50 kDa	60 kDa	50 kDa	55 kDa	55 kDa	70 kDa	62 kDa	70 kDa
L chain MW * (light chain κ & λ)	23 kDa	23 kDa	23 kDa	23 kDa	23 kDa	23 kDa	23 kDa	23 kDa	23 kDa
Total MW	150 kDa	150 kDa	170 kDa	150 kDa	160 kDa (serum) 600 kDa (secretory)	160 kDa (serum) 600 kDa (secretory)	970 kDa	180 kDa	190 kDa
Ext. Coeff. 0.1%@280nm	1.4	1.4	1.4	1.4	1.32	1.32	1.18	1.7	1.53
Complement fixation	weak	weak	strong	no	no	no	strong	no	no
Fc receptor binding	strong	weak	strong	weak	yes	yes	yes	no	yes
Mast cell / basophil degranulation	no	no	no	no	no	no	no	no	yes
Placental transfer	strong	weak	strong	strong	no	no	no	no	no

* Light chains are present on all immunoglobulin classes. In humans, κ chains are found 67% of the time, and λ chains are found 33% of the time. For ratios in other species (see Table, Immunoglobulin Light Chain Ratios)