Antibodies

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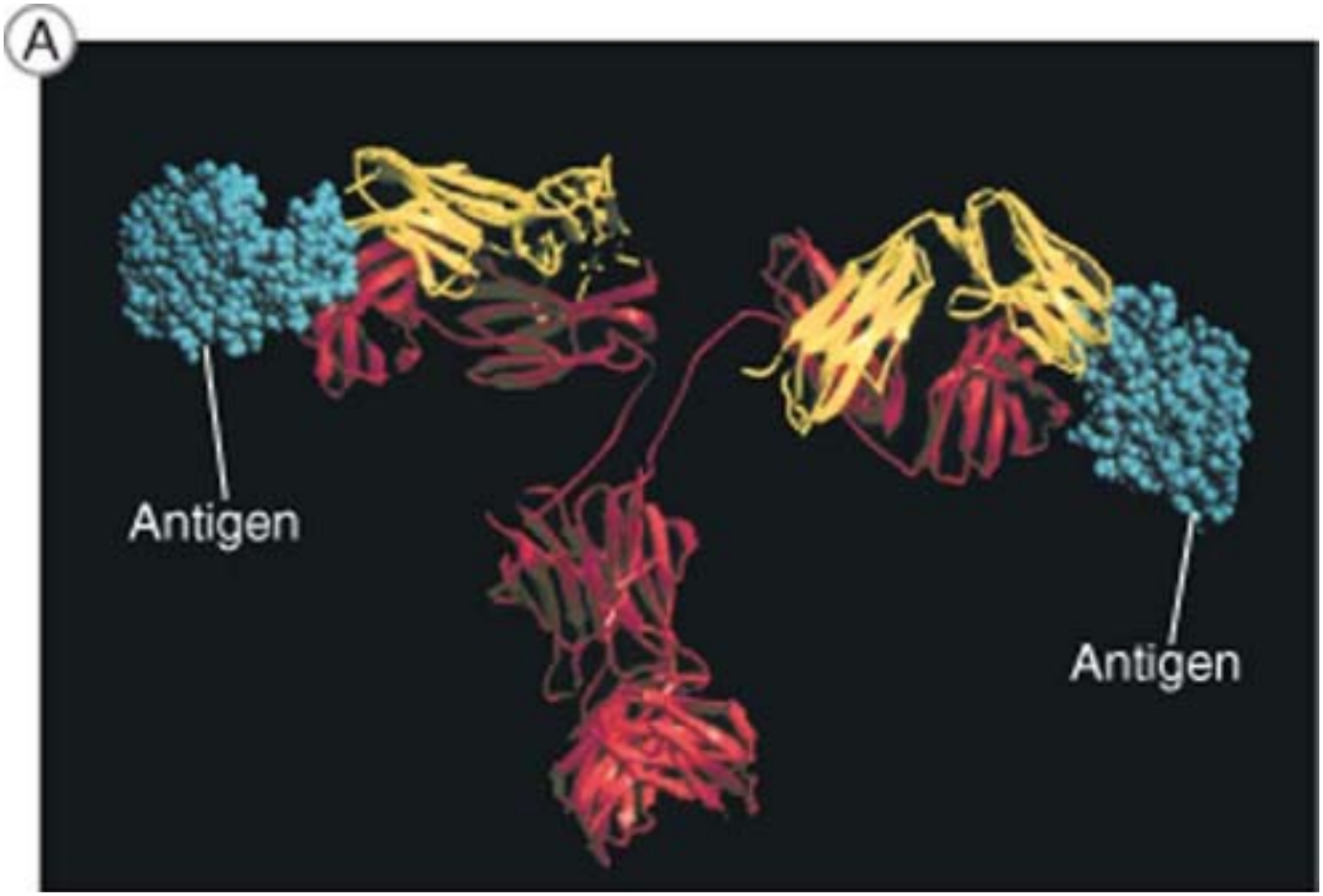
An **antibody** (**Ab**), also known as an **immunoglobulin** (**Ig**), is a large, Y-shaped protein used by the immune system to identify and neutralize foreign objects such as pathogenic bacteria and viruses. The antibody recognizes a unique molecule of the pathogen, called an antigen. Each tip of the "Y" of an antibody contains a paratope (analogous to a lock) that is specific for one particular epitope (analogous to a key) on an antigen, allowing these two structures to bind together with precision.

Antigen/antibody complex



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Wikipedia

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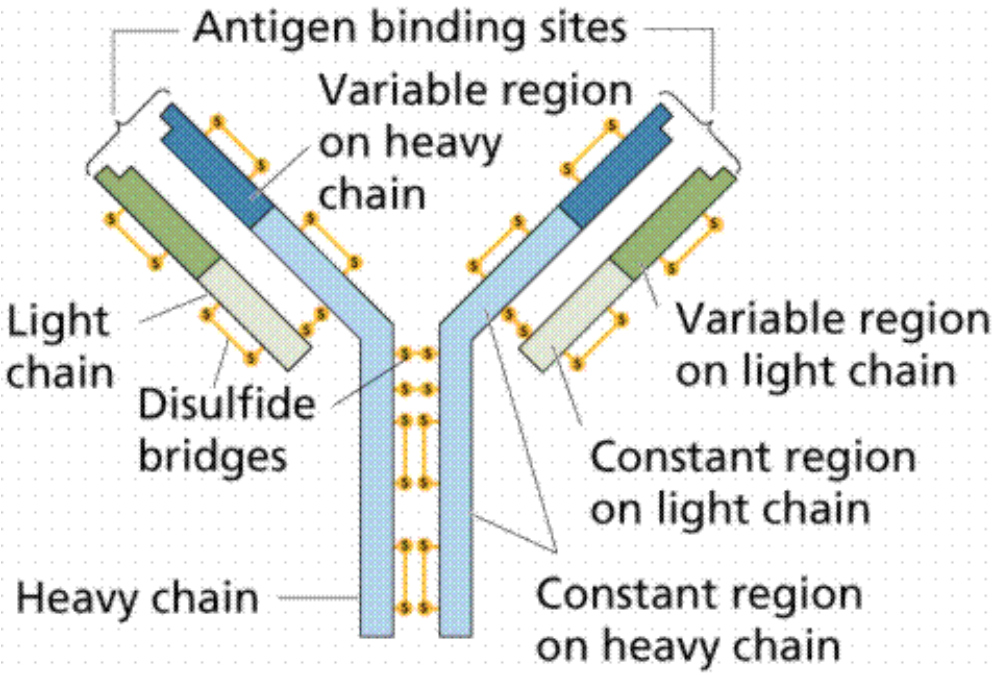
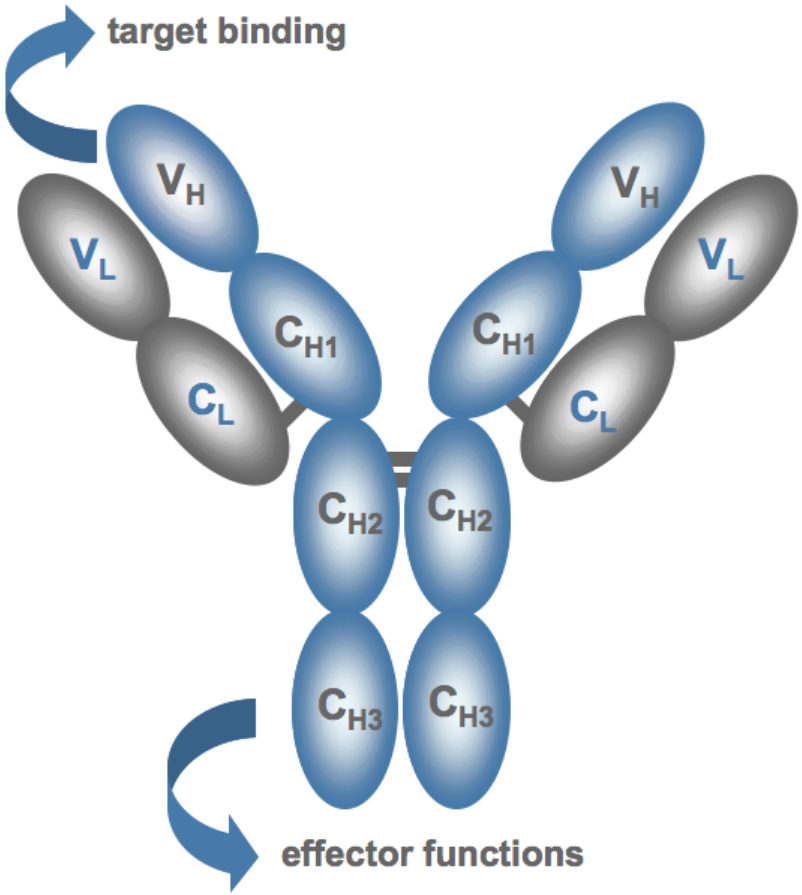
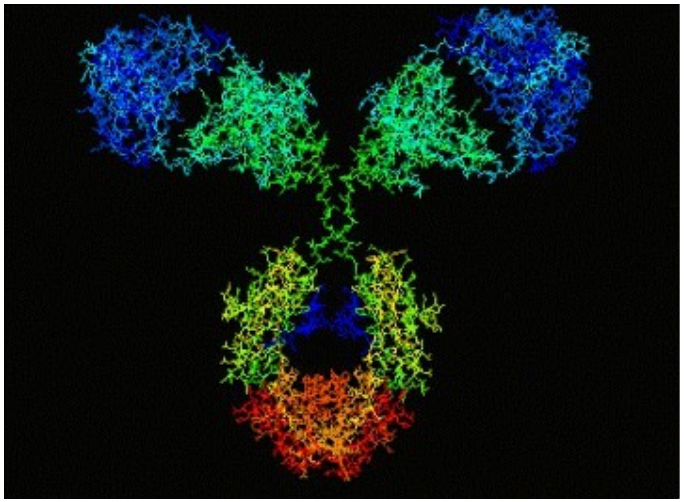
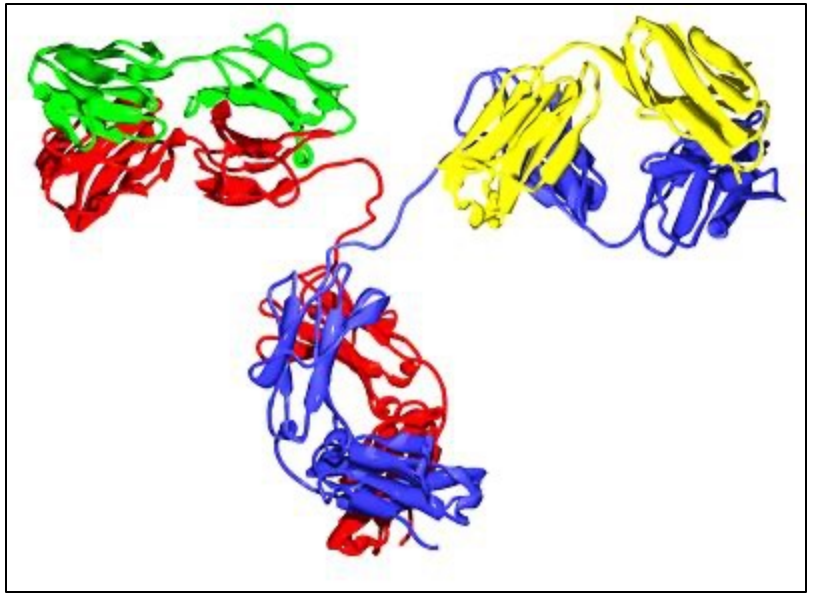
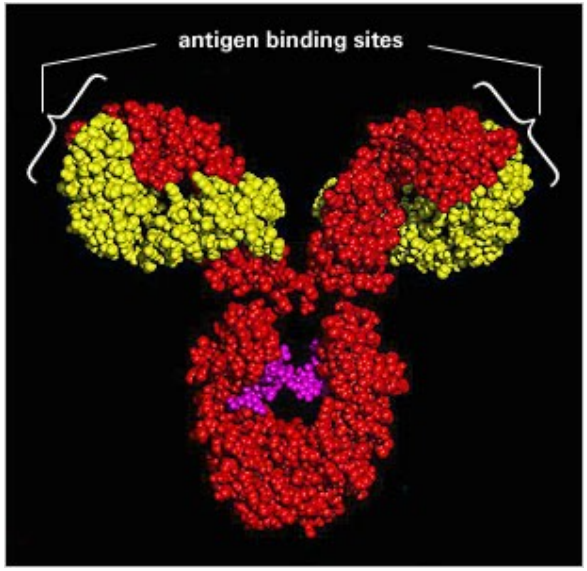




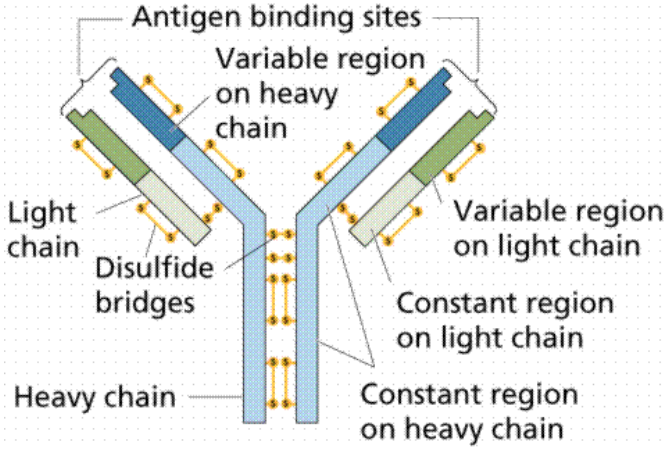
Google Immagini

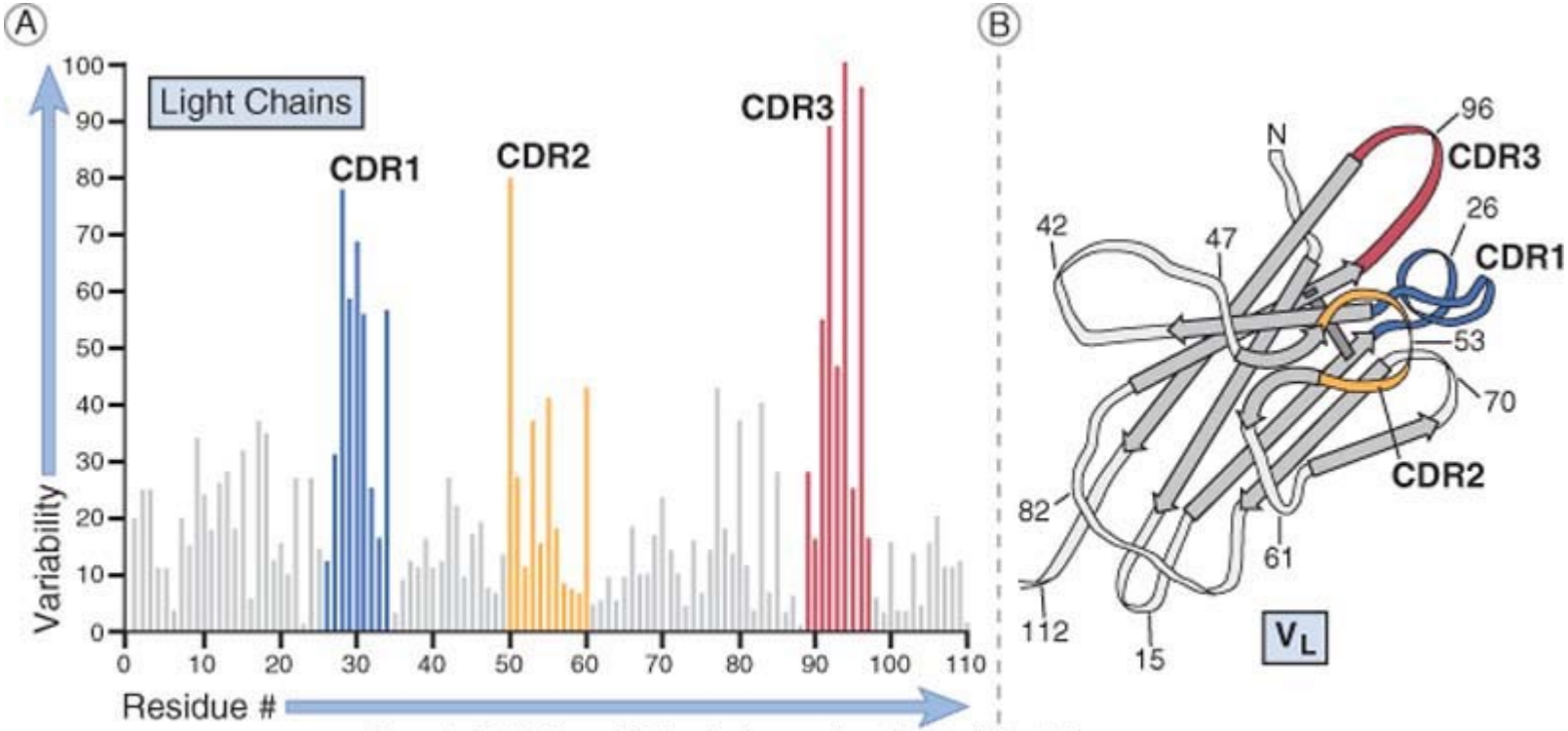




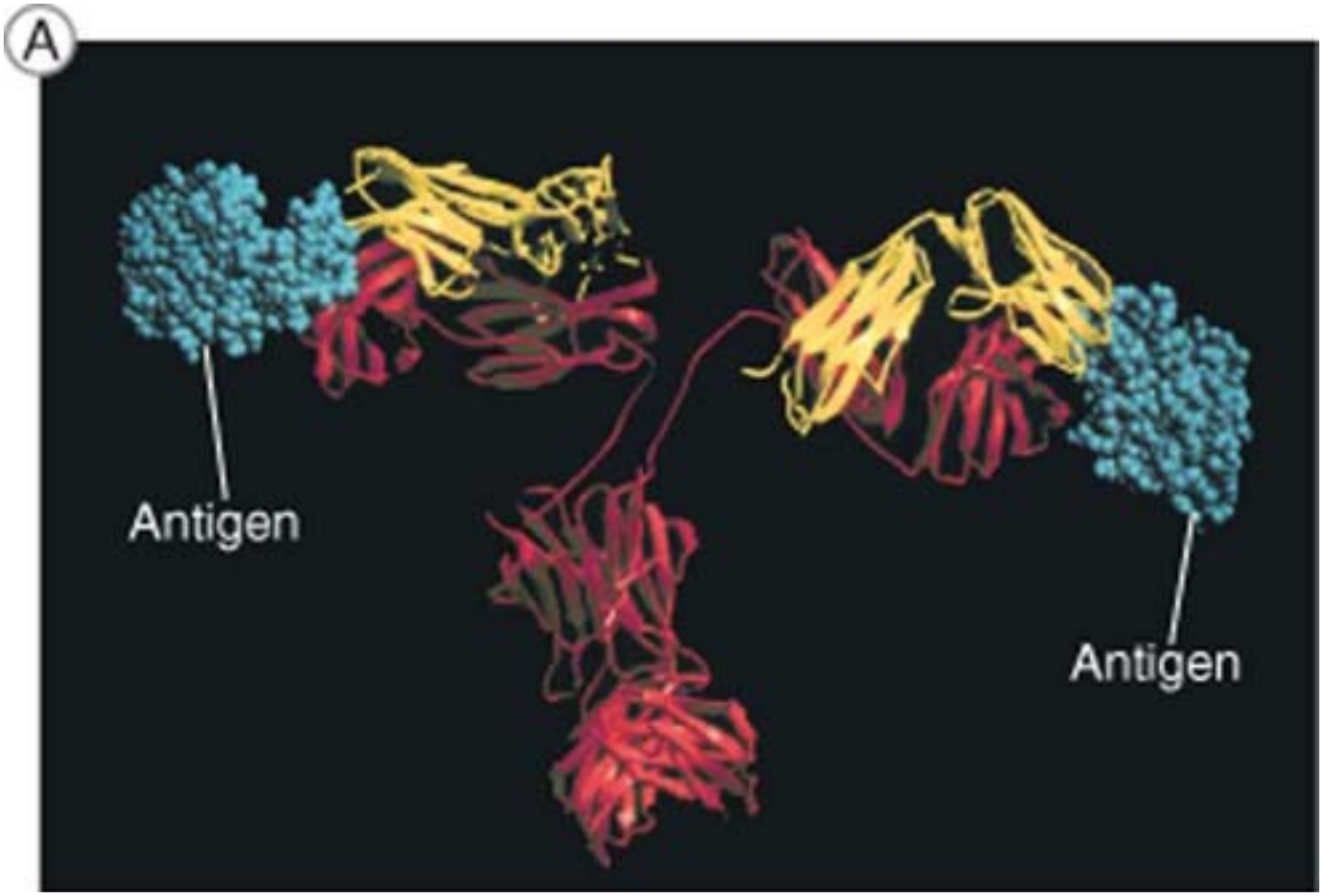

antigen binding sites

Aminoacid variability in antibody sequence

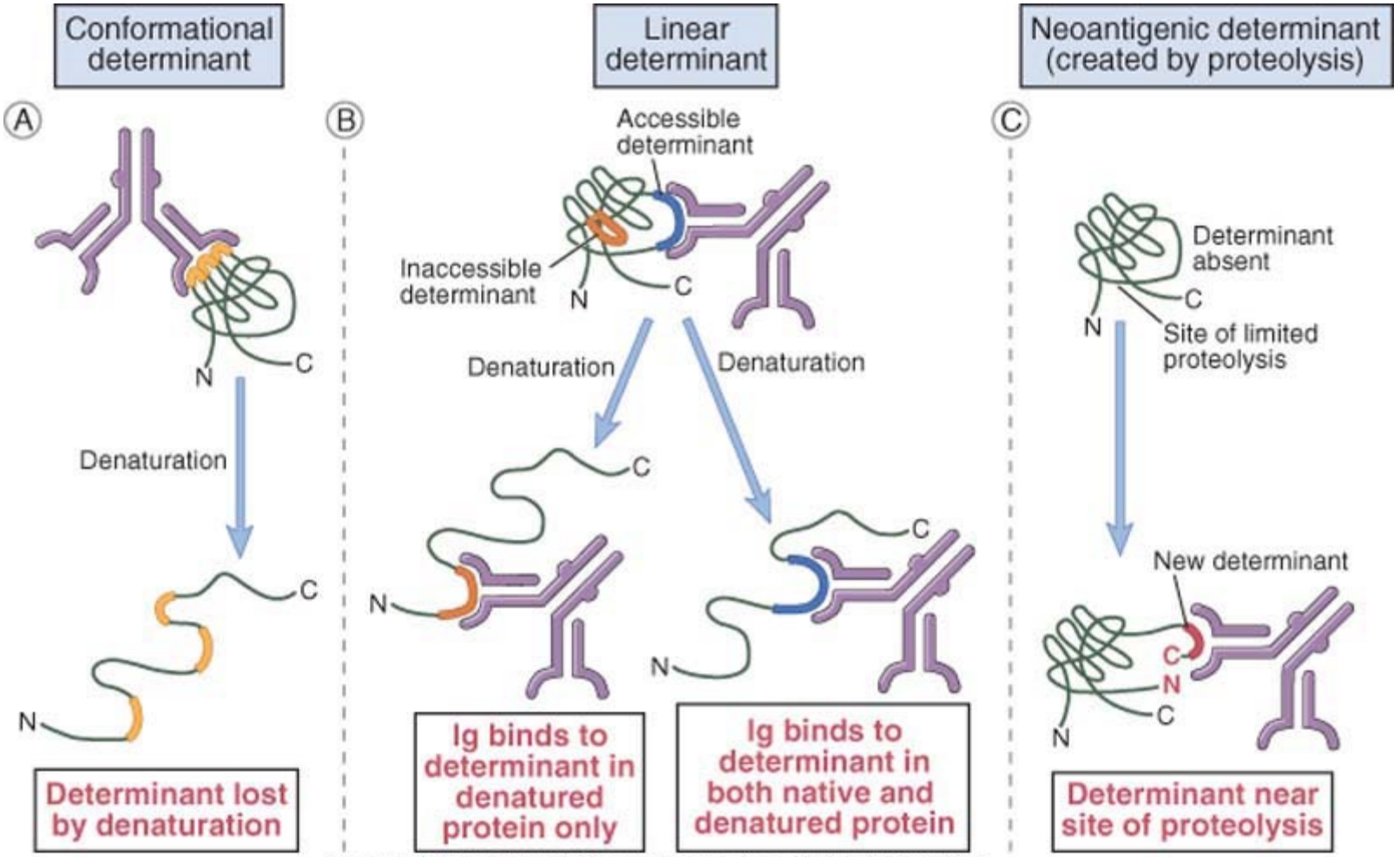




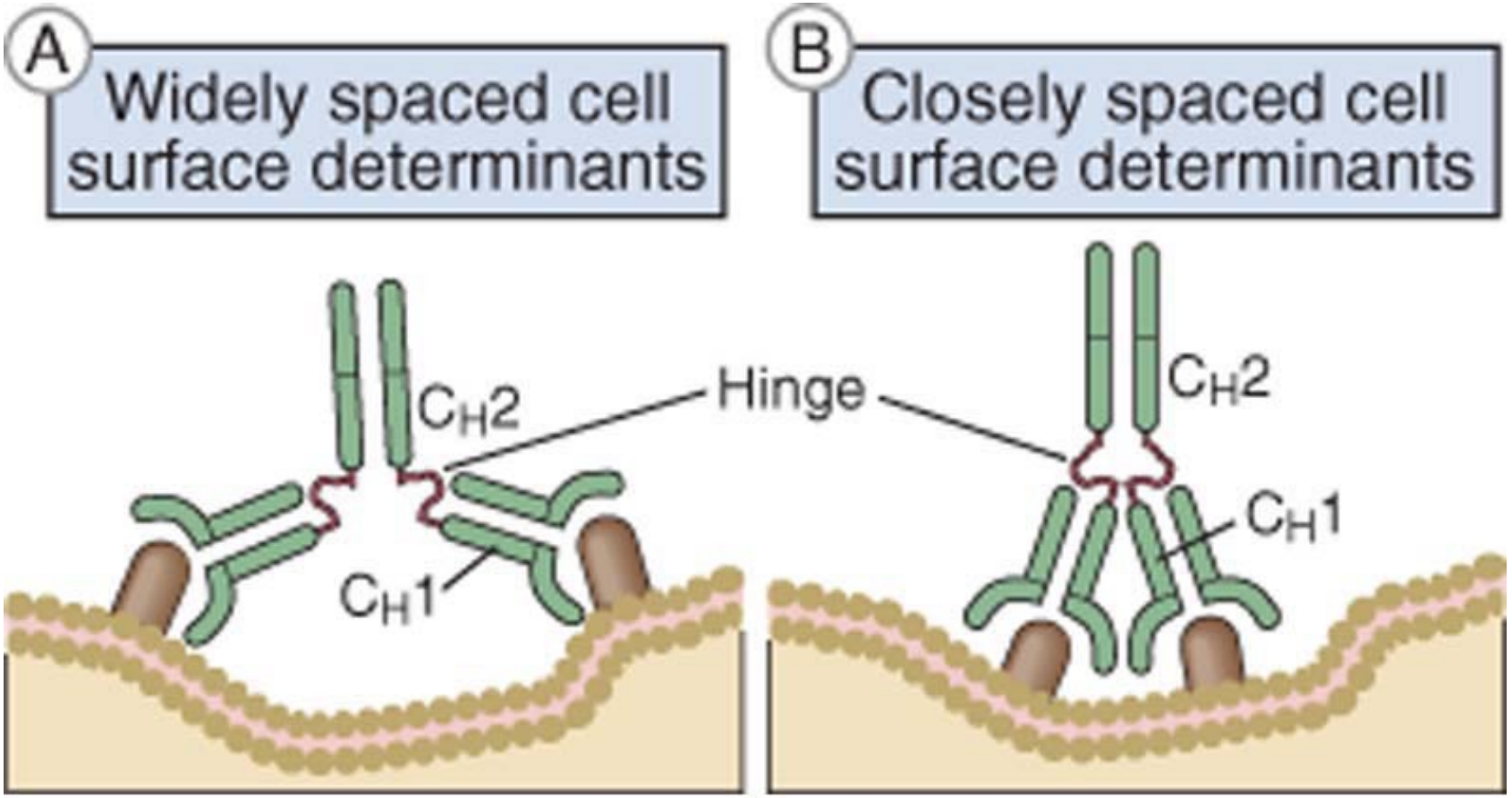
Antigen/antibody complex

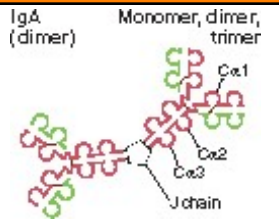
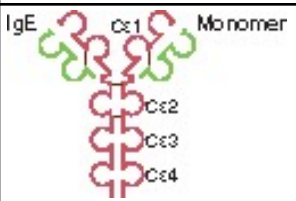
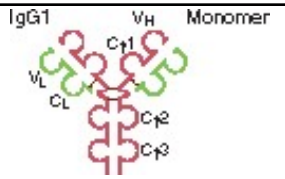
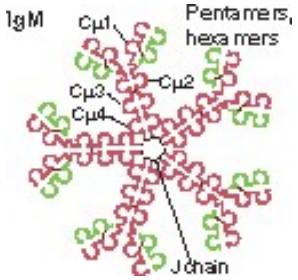


Antigenic determinant (epitope)



Antigen/antibody complex on cell membrane



Type	Subtype	Serum concentration (mg/ml)	Serum Half-life (days)	Secreted form
IgA	1,2	3,5	6	
IgD	-	-	3	-
IgE	-	0,05	2	
IgG	1-4	13,5	23	
IgM	-	1,5	5	

secreted and membrane antibodies