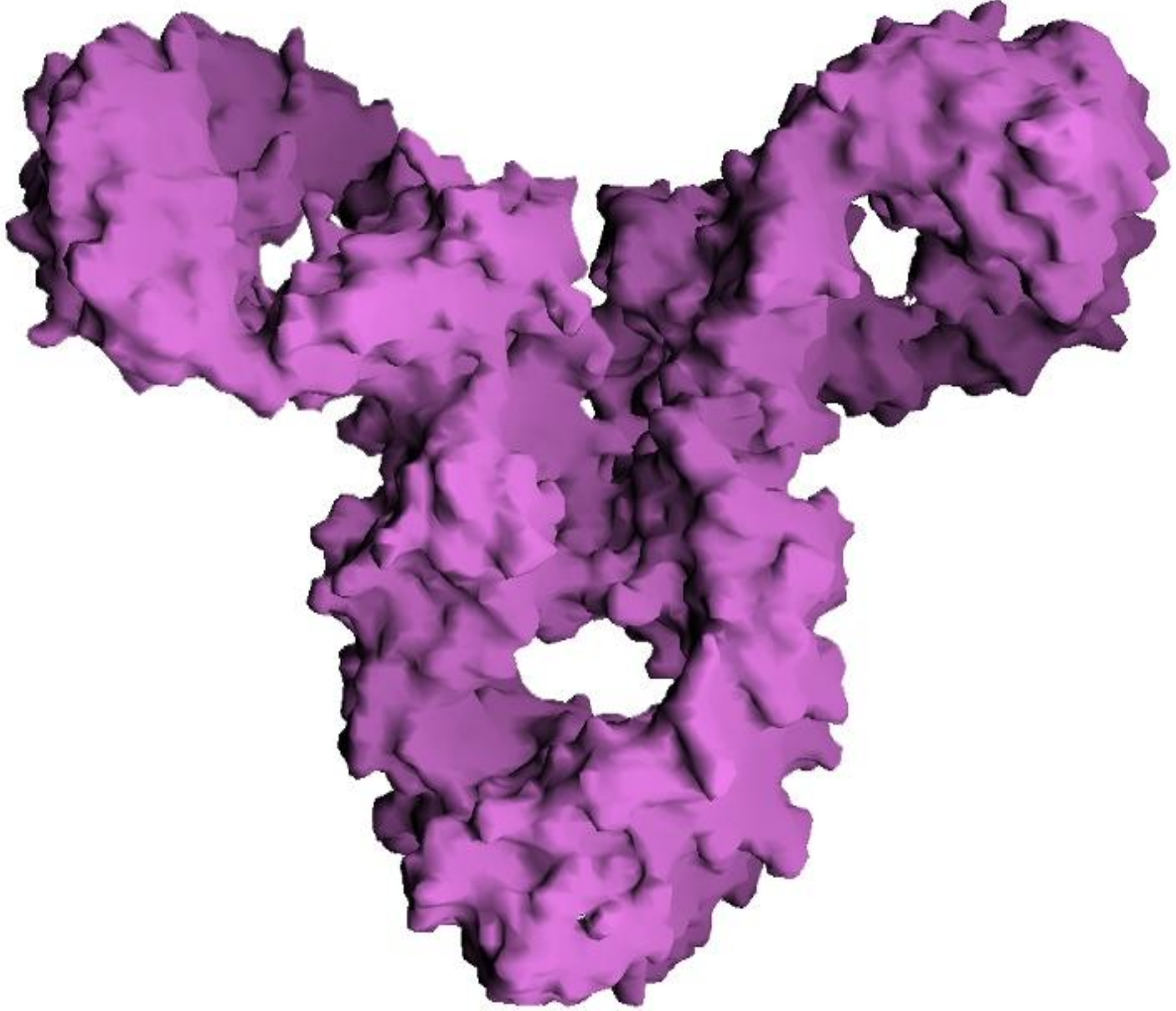
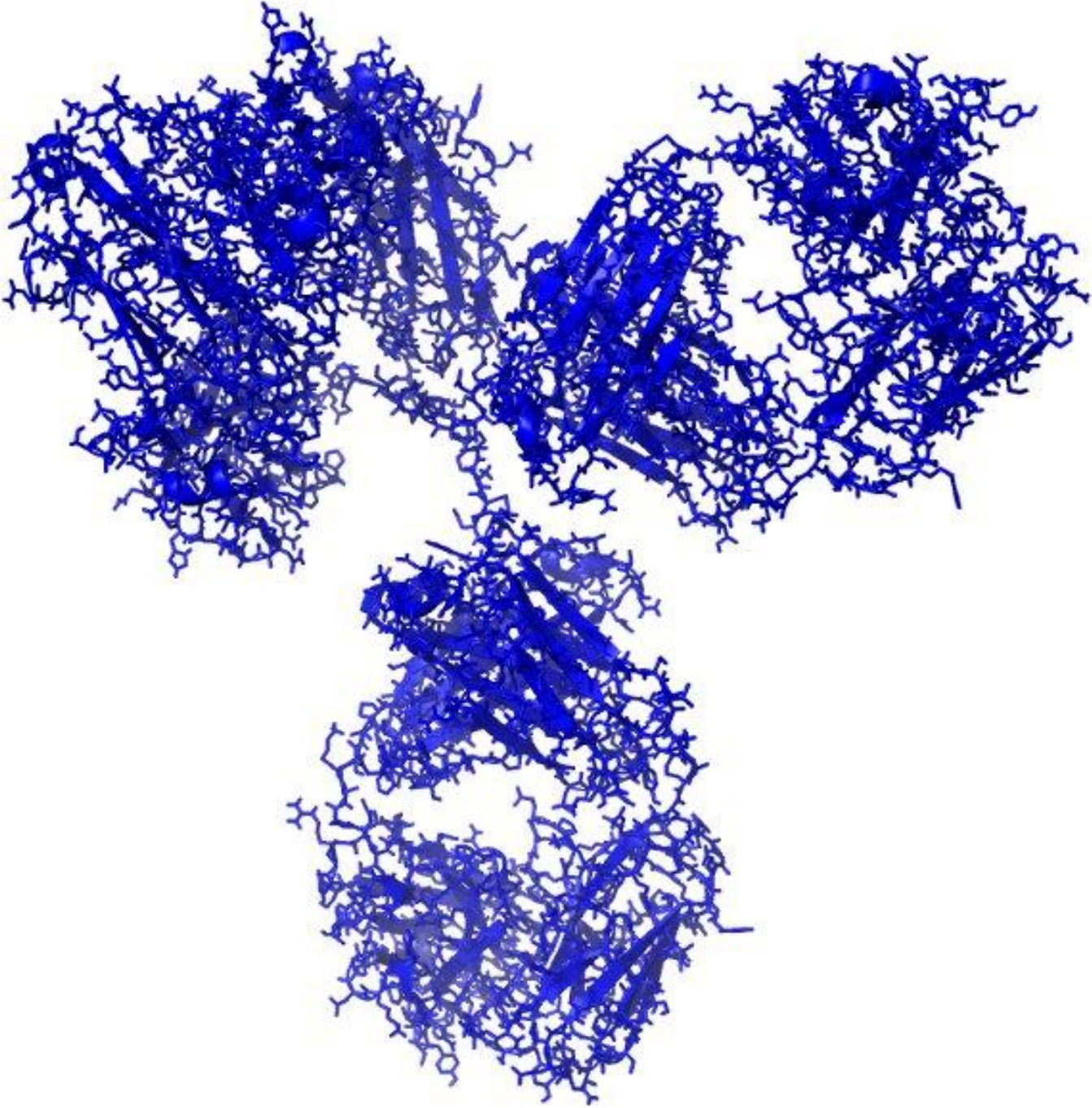


# İmmunglobulin Molekölü



*\*3D gerek model*

# İmmunglobulin Molekölü

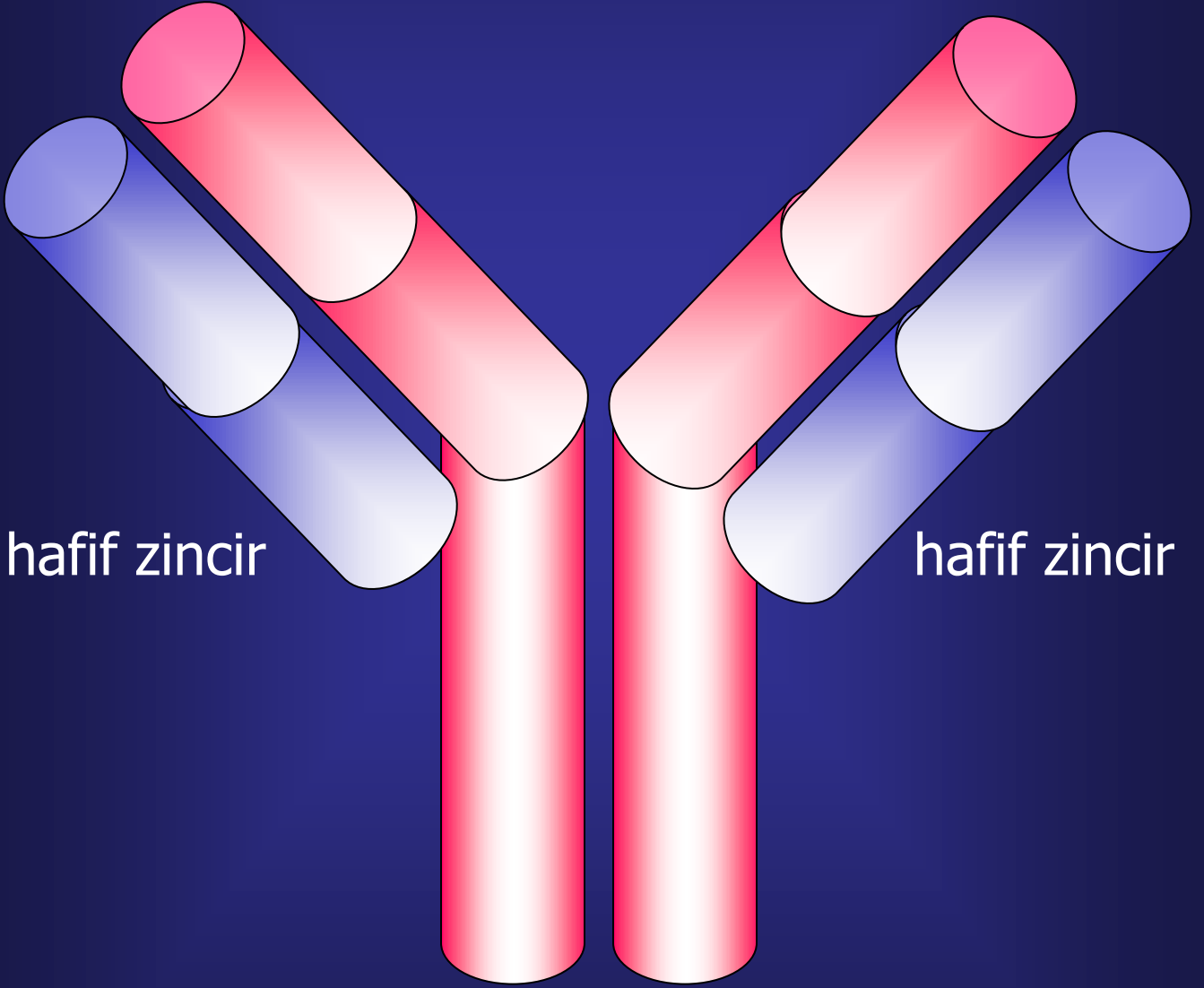


*\*3D iskelet model*

# İmmunglobulin Molekülü

ađır zincir

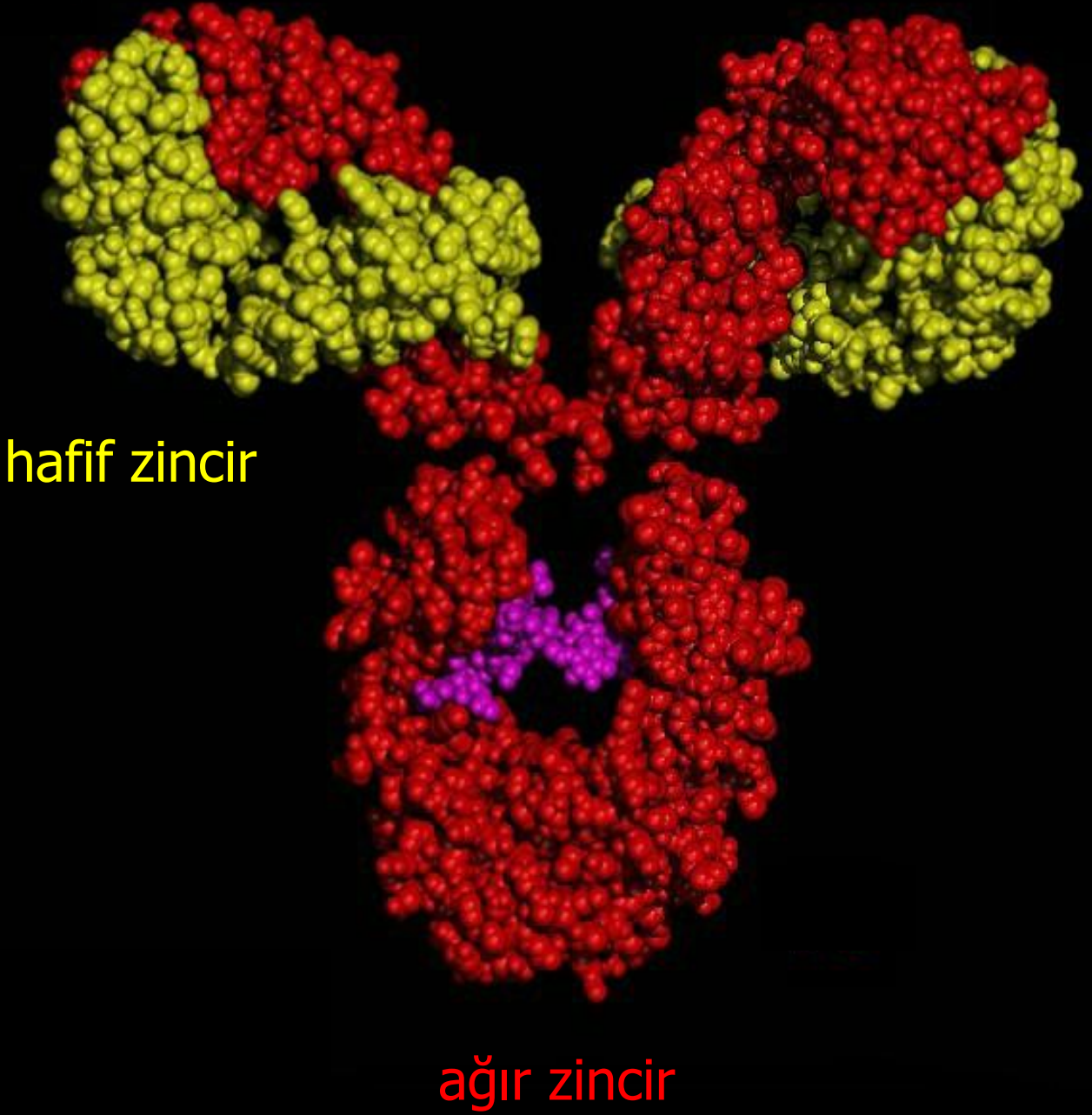
ađır zincir



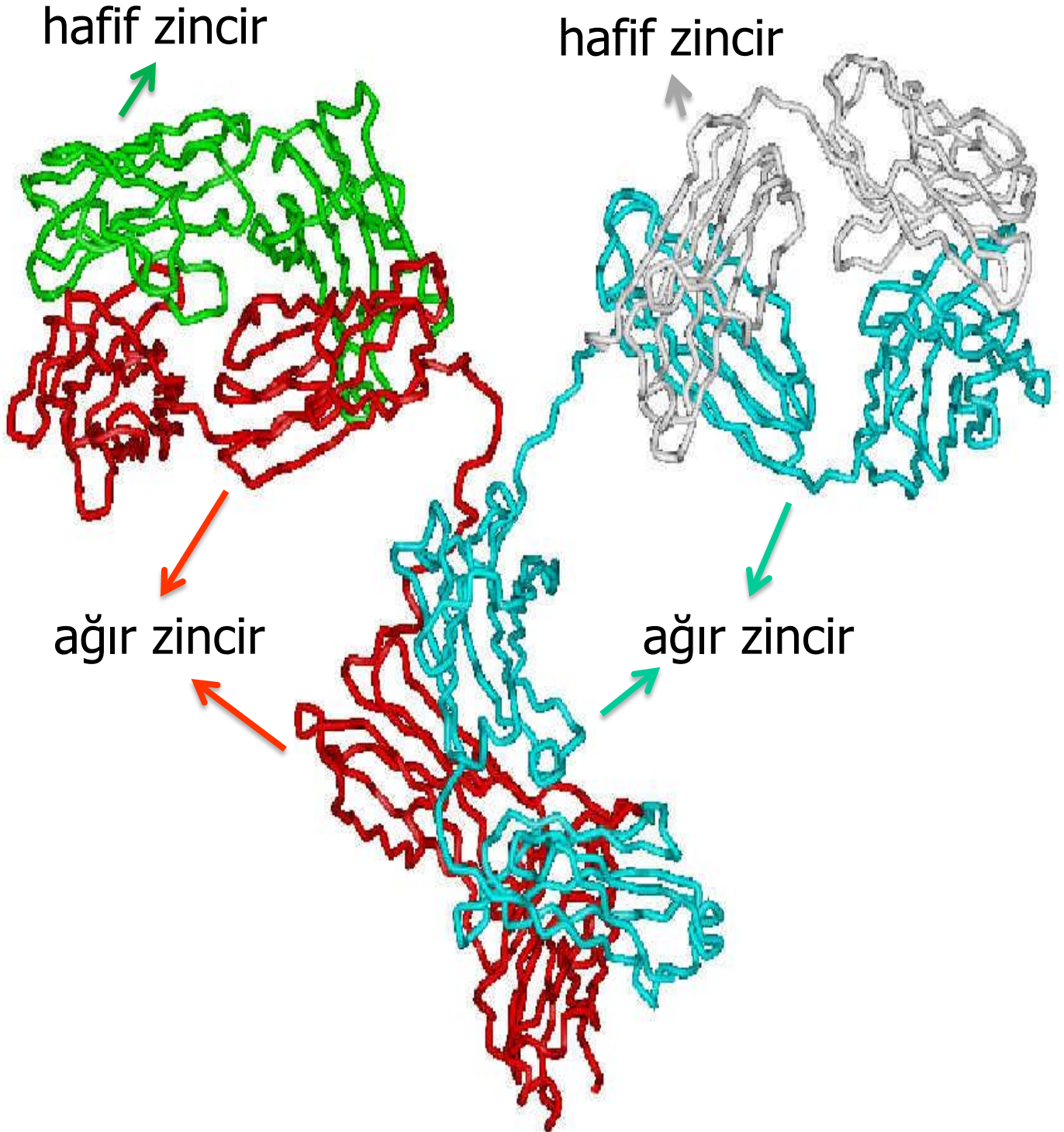
hafif zincir

hafif zincir

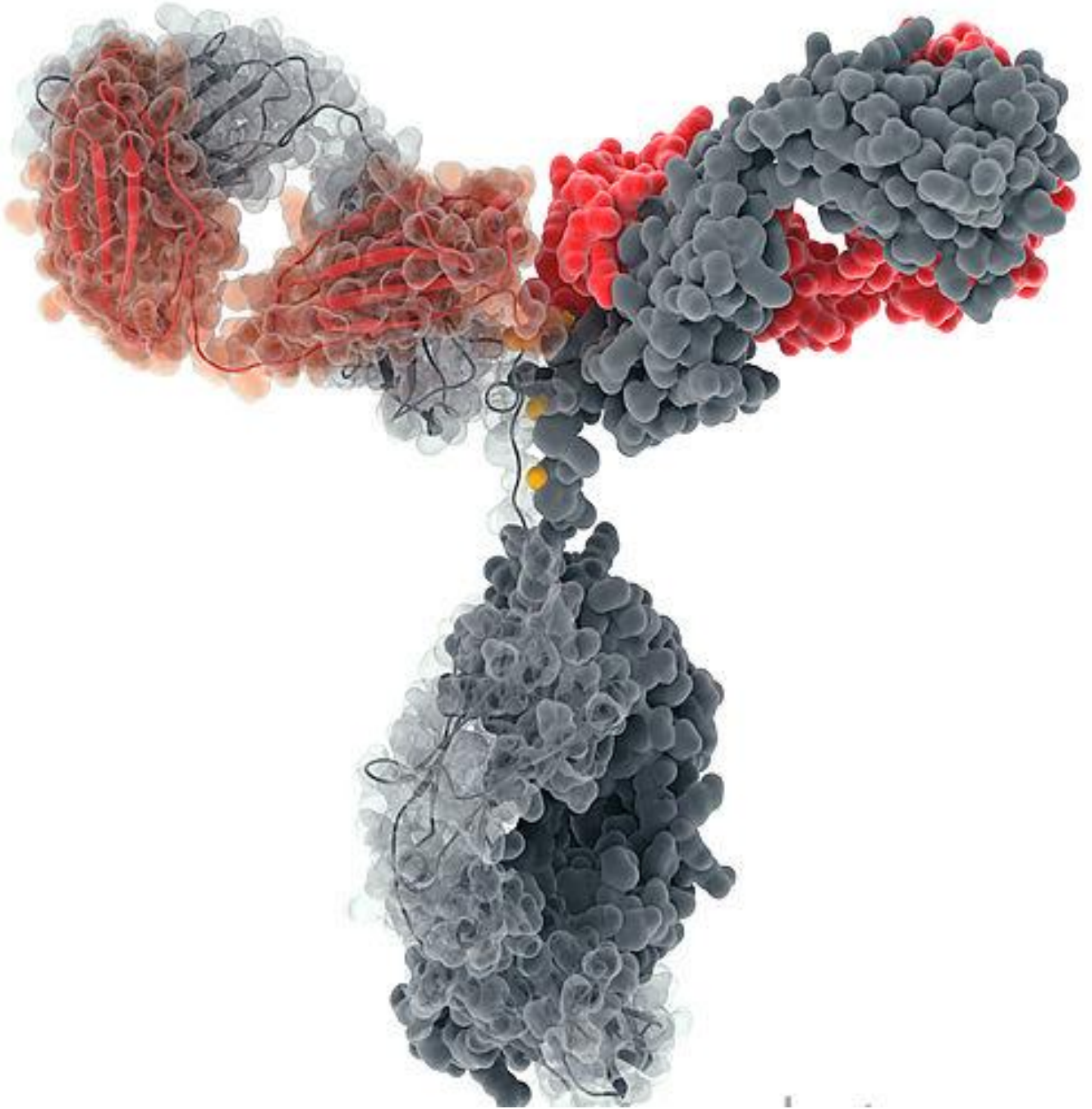
# İmmunglobulin Molekölü



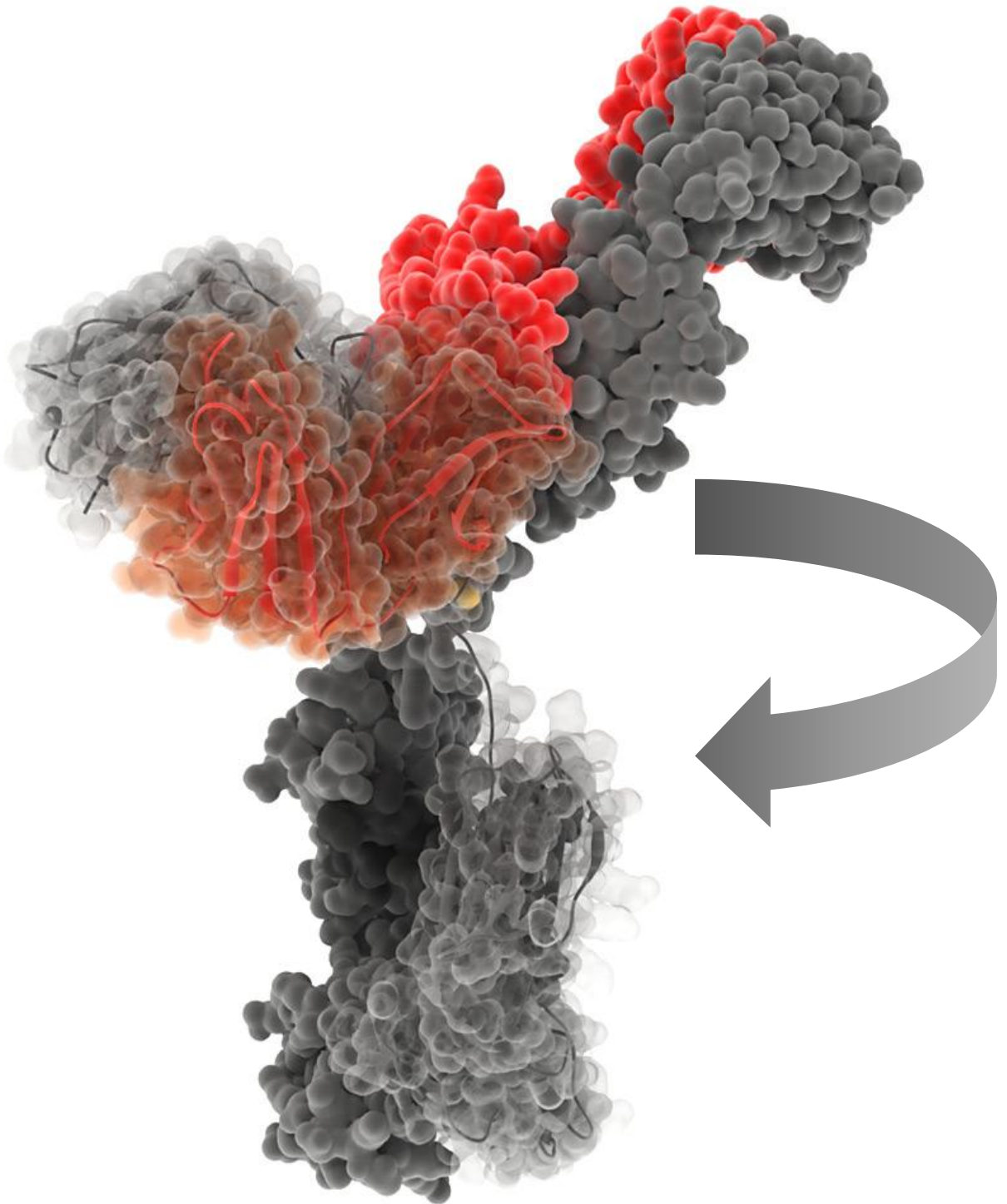
# İmmunglobulin Molekölü



# İmmunglobulin Molekülü

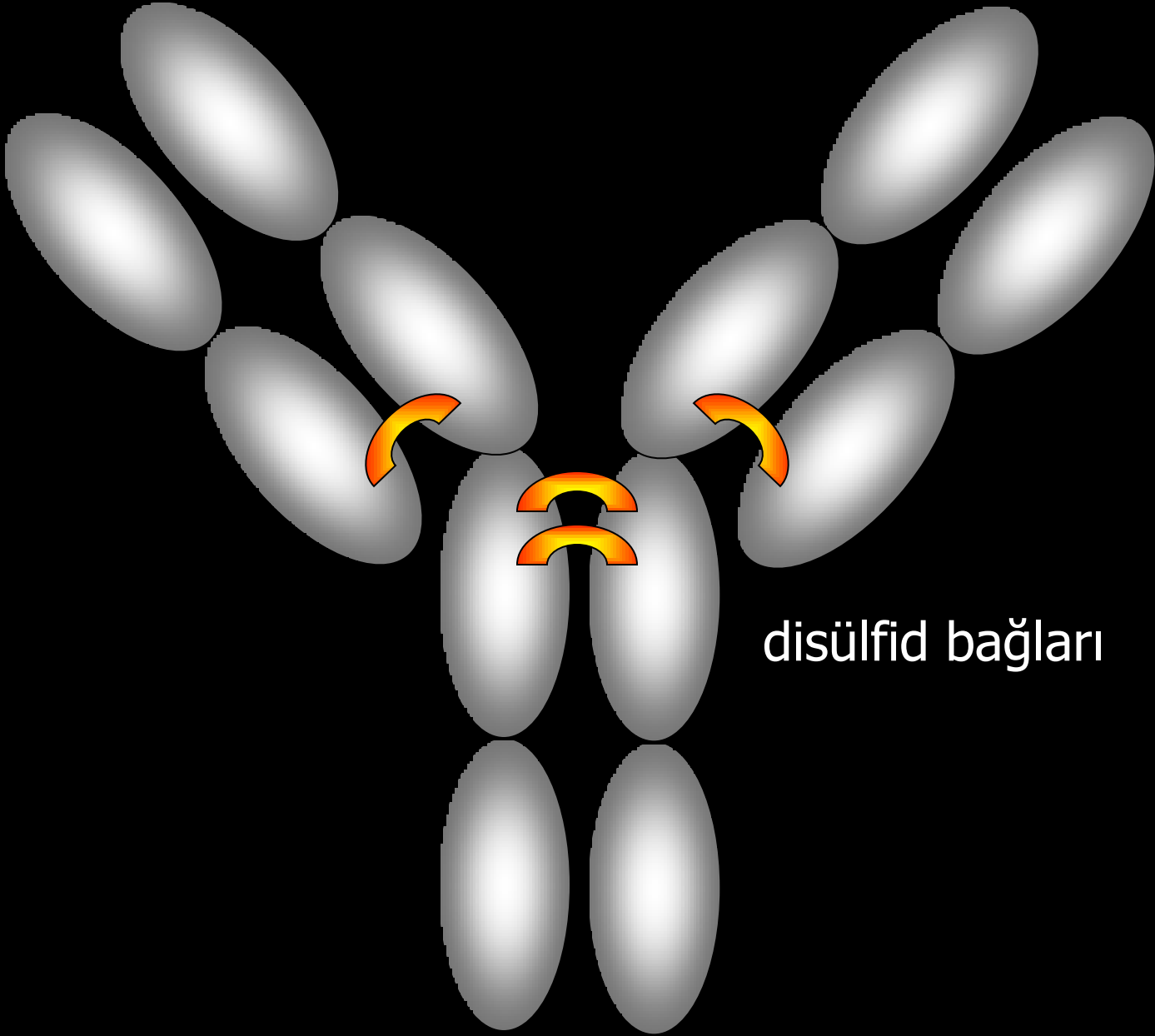


# İmmunglobulin Molekülü

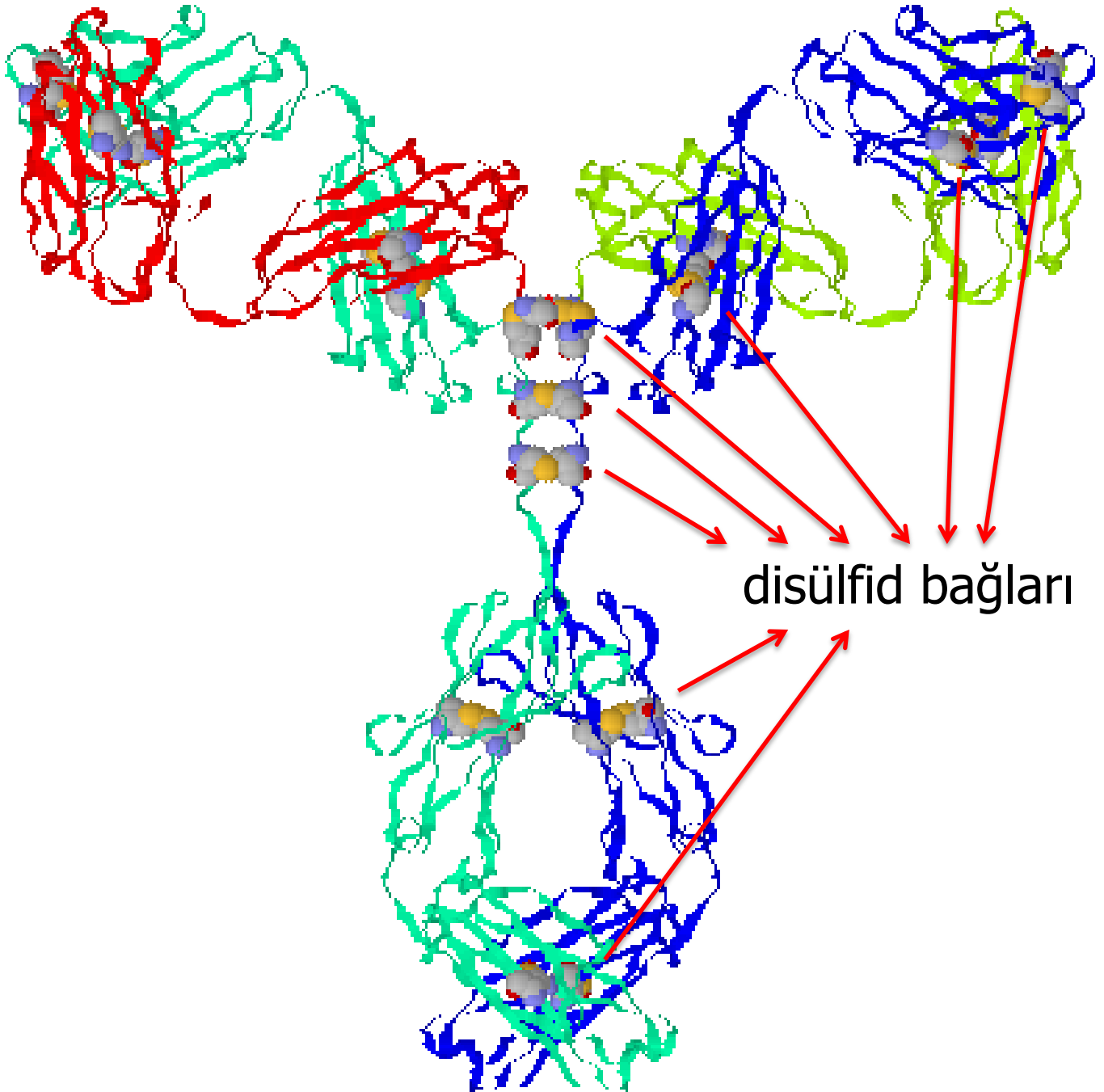




# İmmunglobulin Molekölü



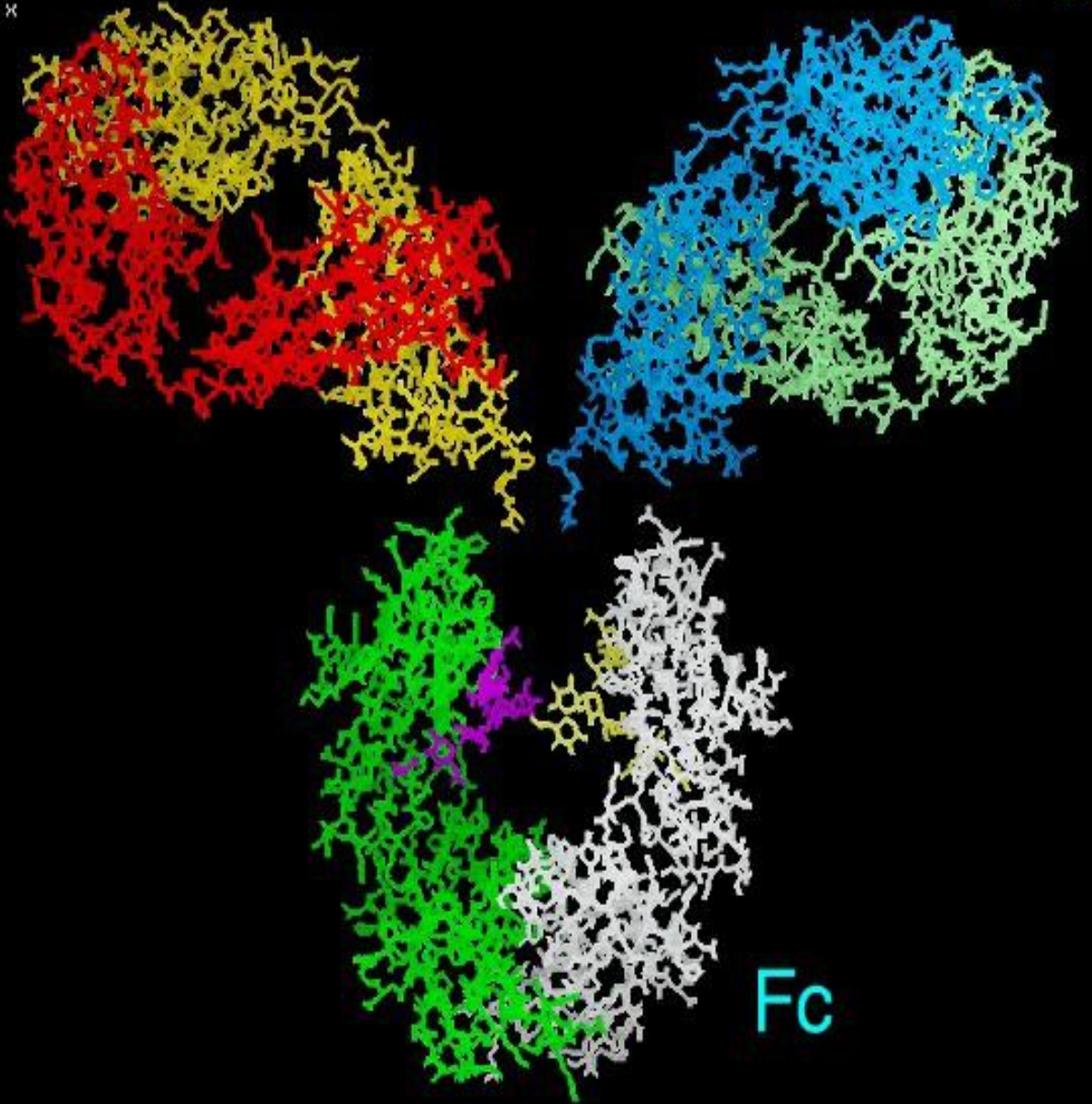
# İmmunglobulin Molekölü



# İmmunglobulin Molekülü

**Fab** = *antijene bağlanan fragment*

**Fab**



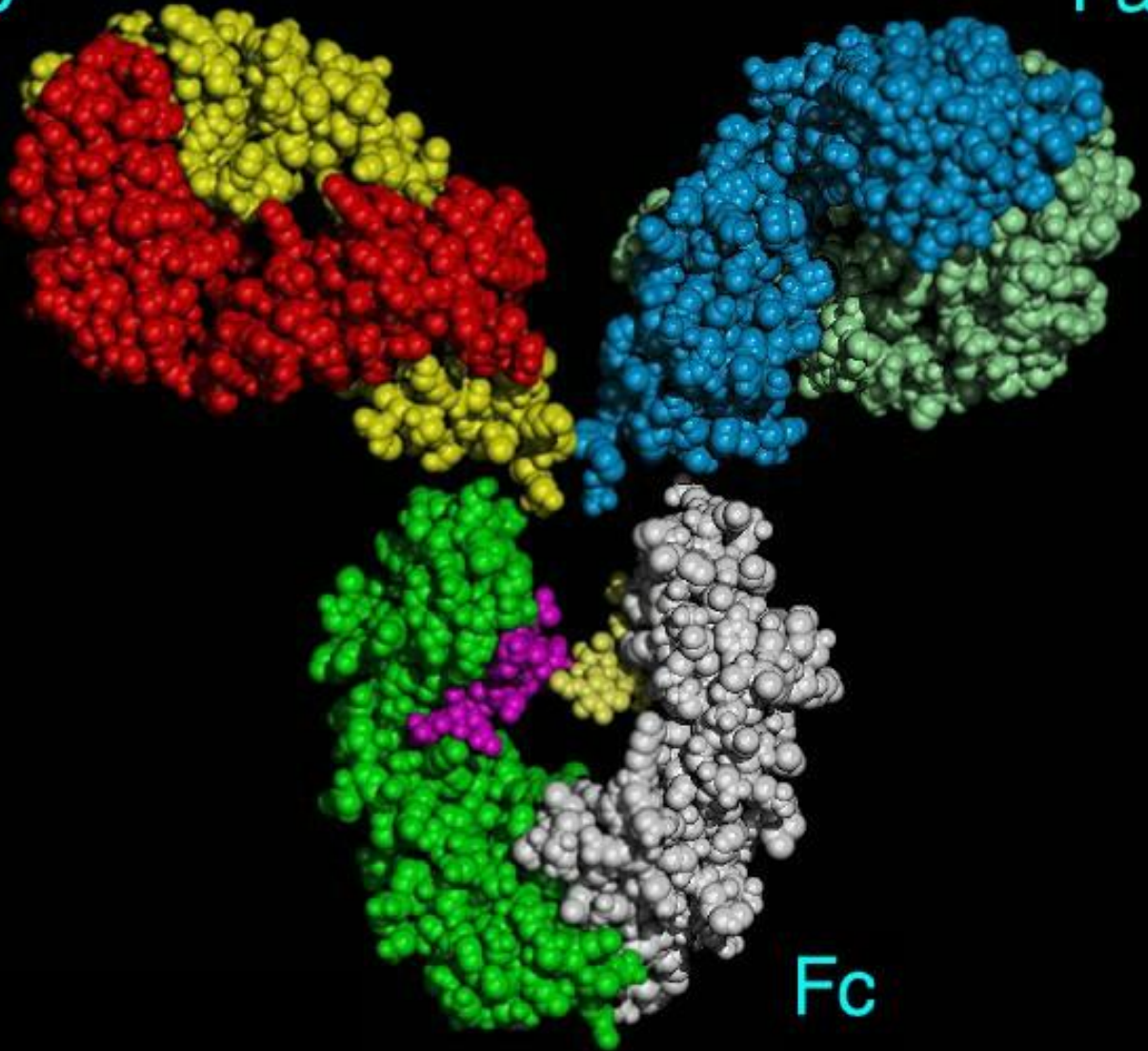
**Fc**

**Fc** = *kristalize olan fragment*

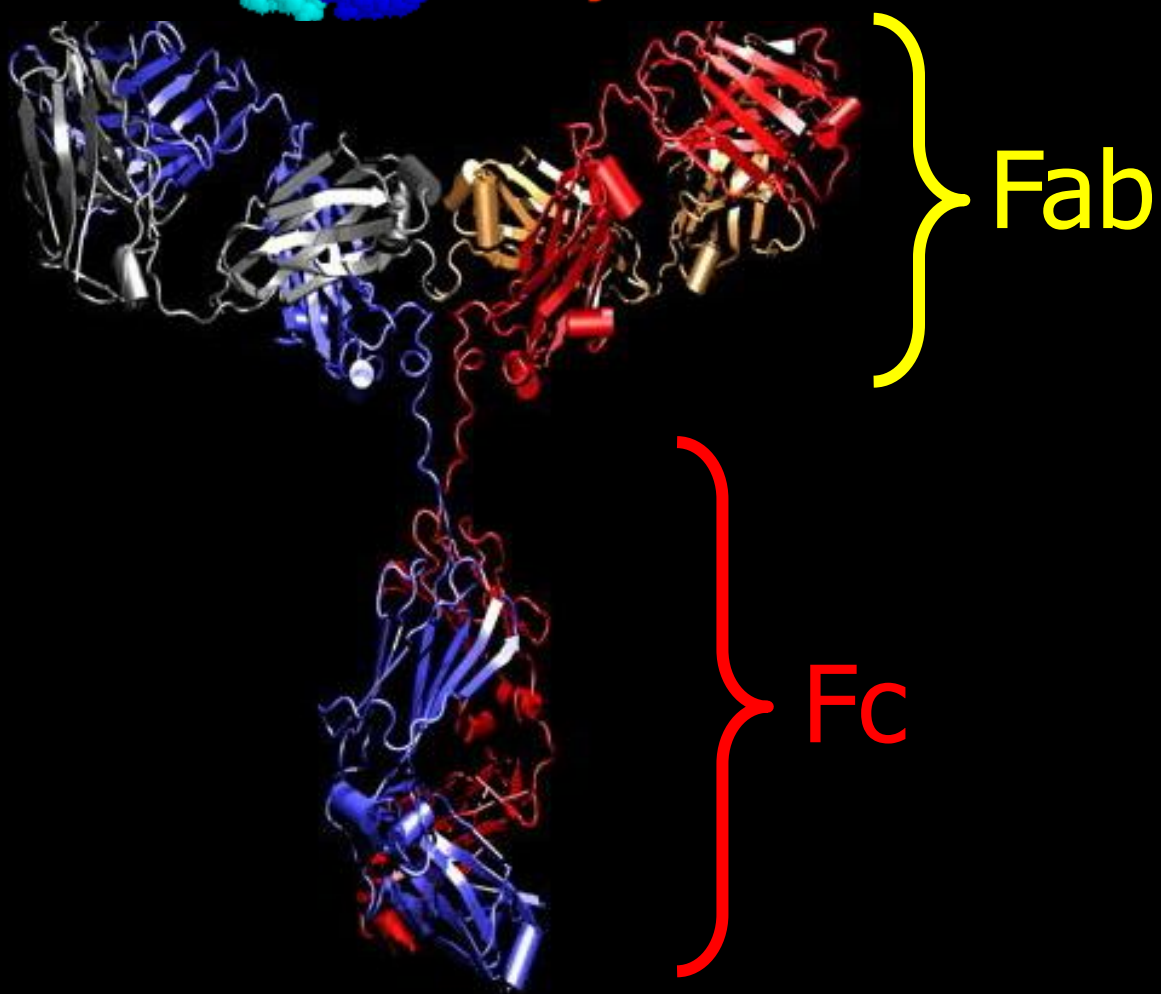
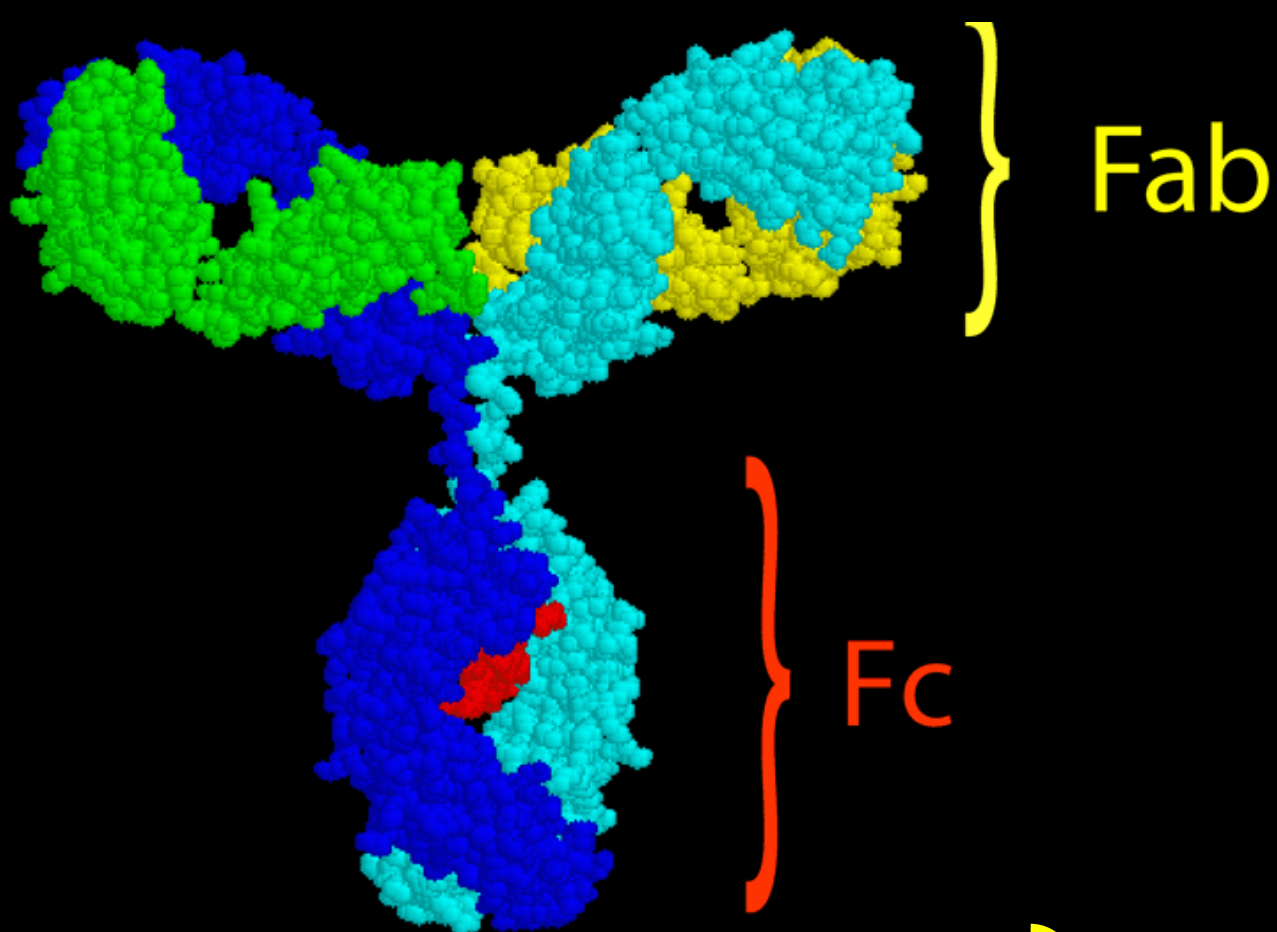
# İmmunglobulin Molekülü

Fab

Fab



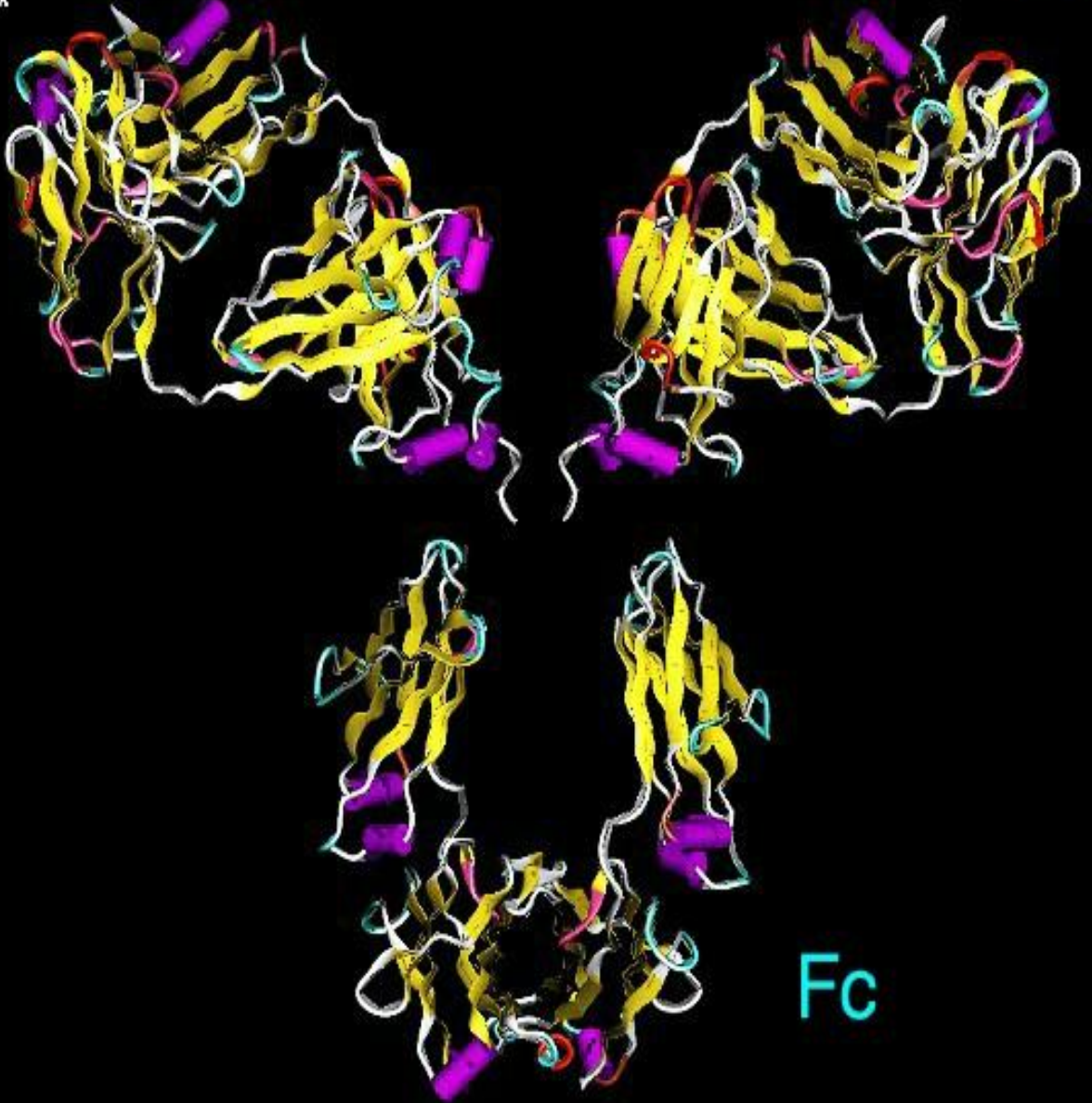
Fc



# İmmunglobulin Molekülü



Fab



Fc

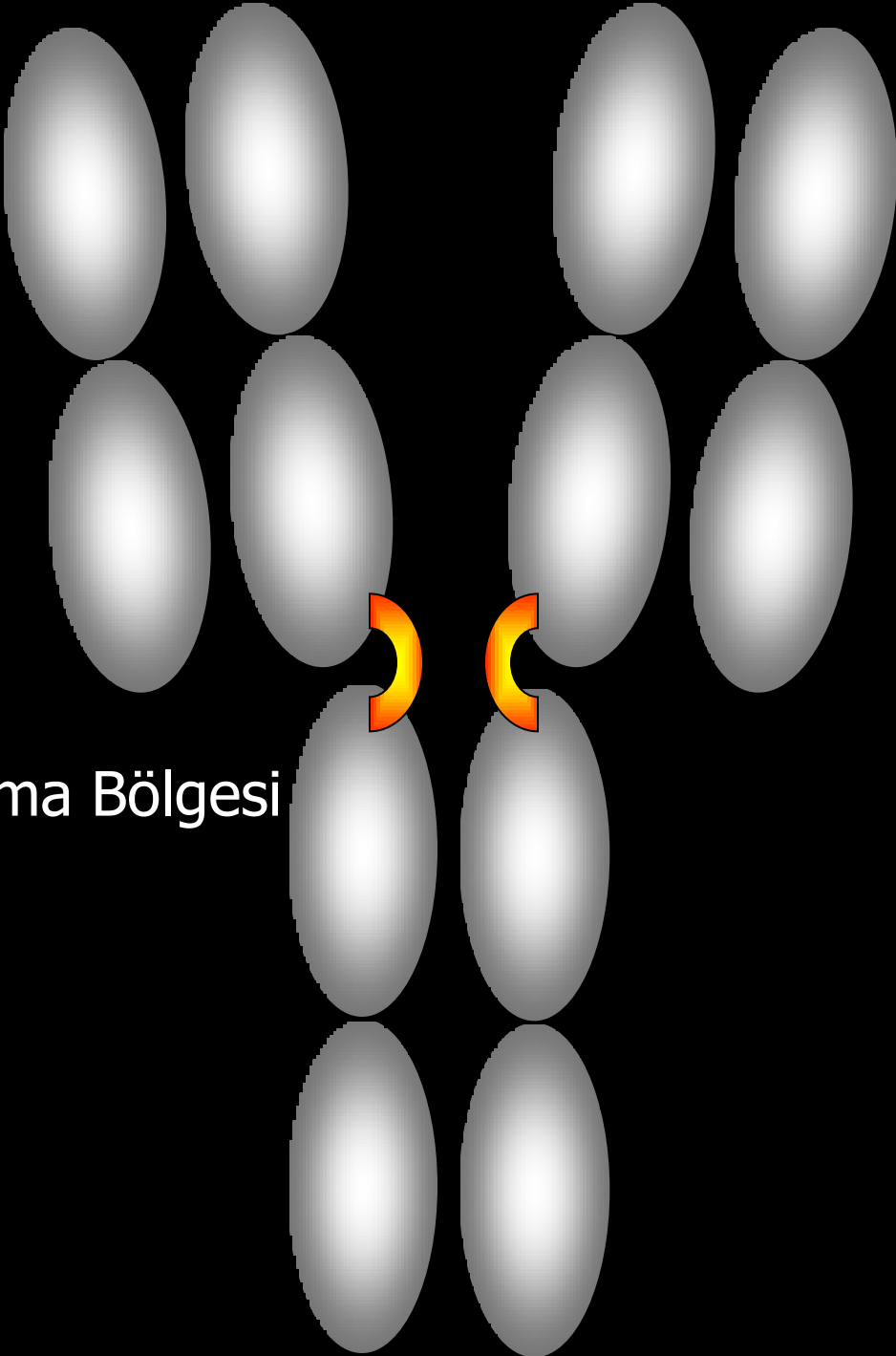
# İmmunglobulin Molekülü



Fab



# İmmunglobulin Molekülü

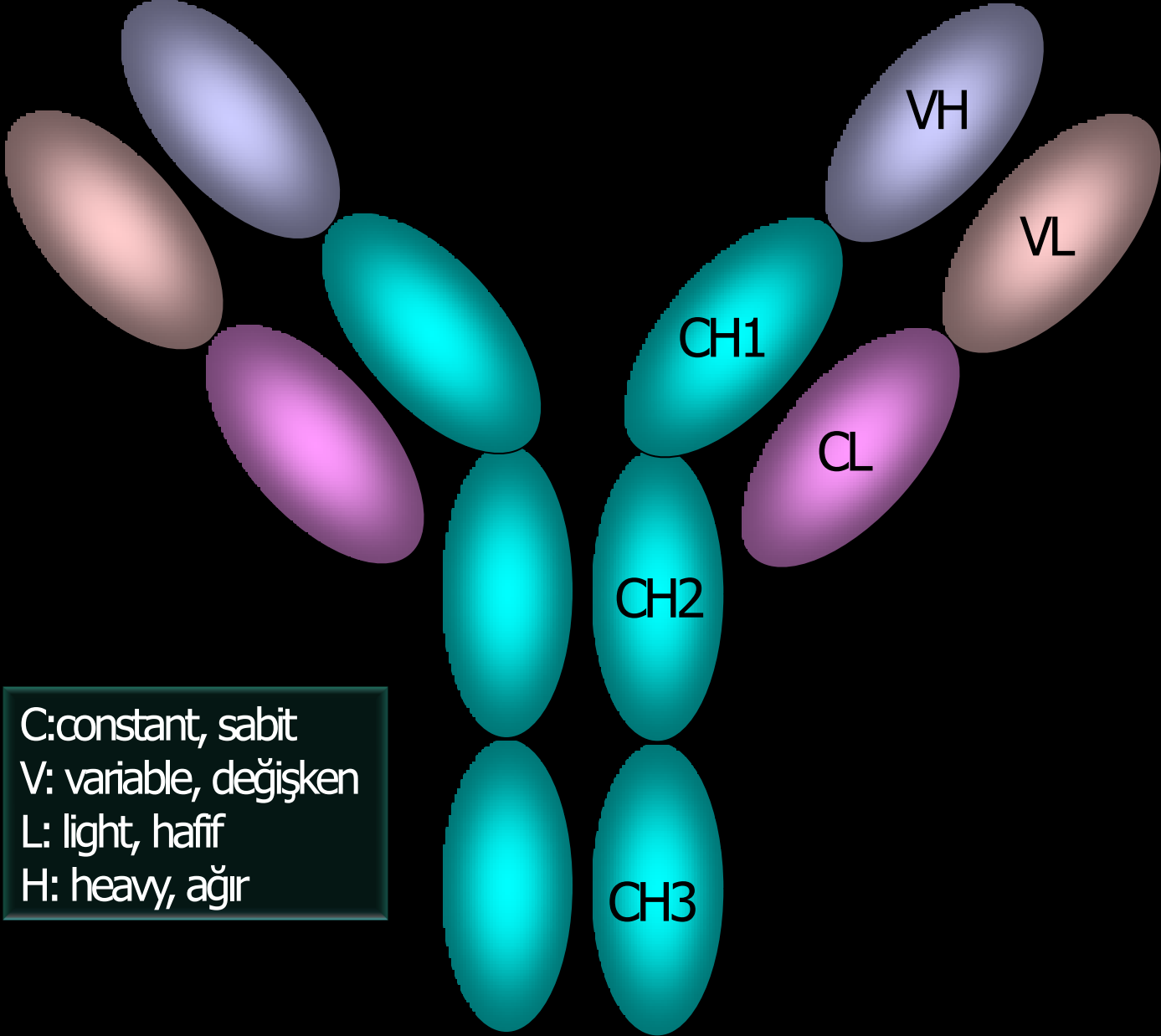


Katlanma Bölgesi



# İmmunglobulin Molekülü

## İlmeK Bölgeleri

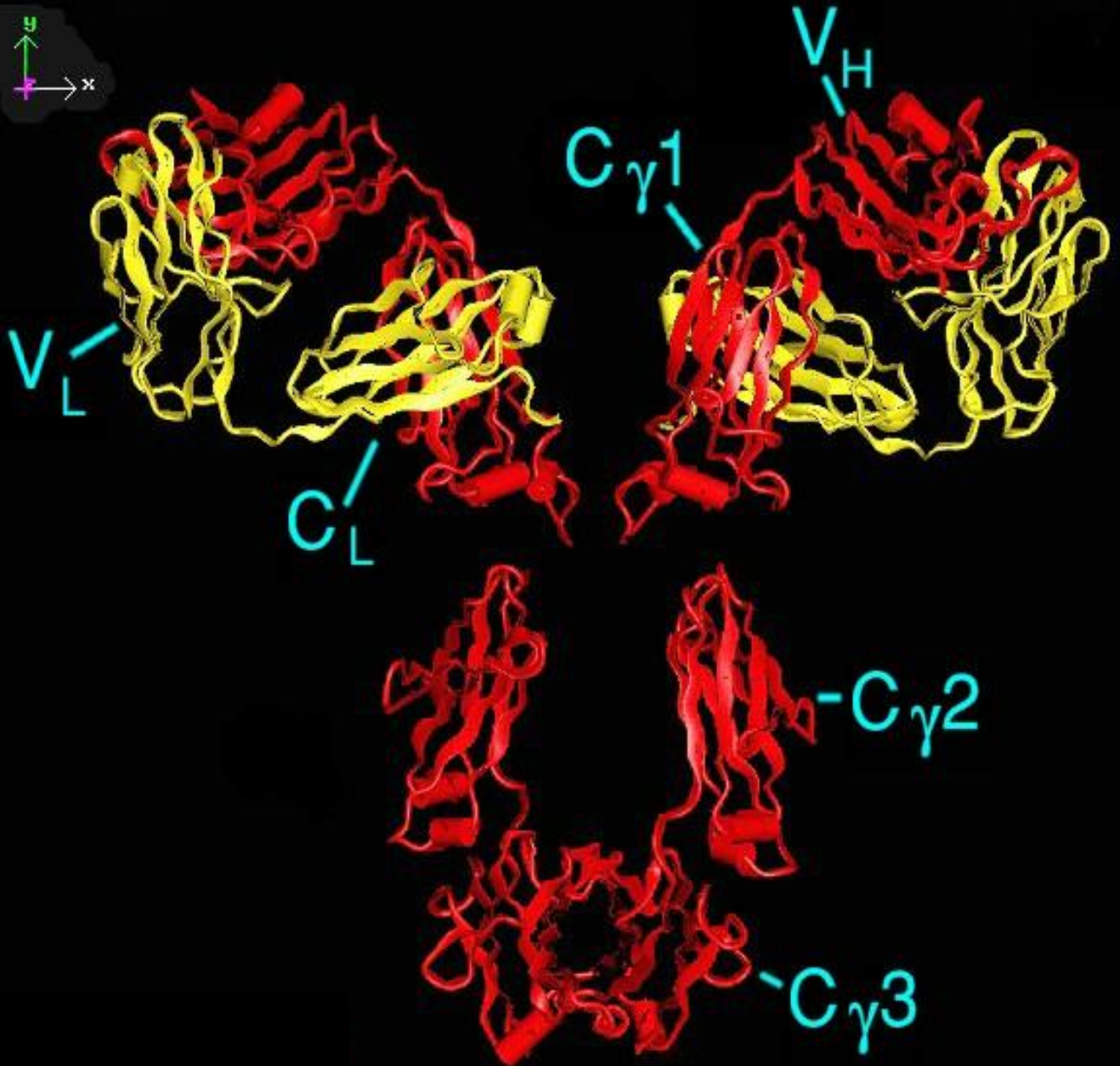


C: constant, sabit  
V: variable, deęişken  
L: light, hafif  
H: heavy, ağır

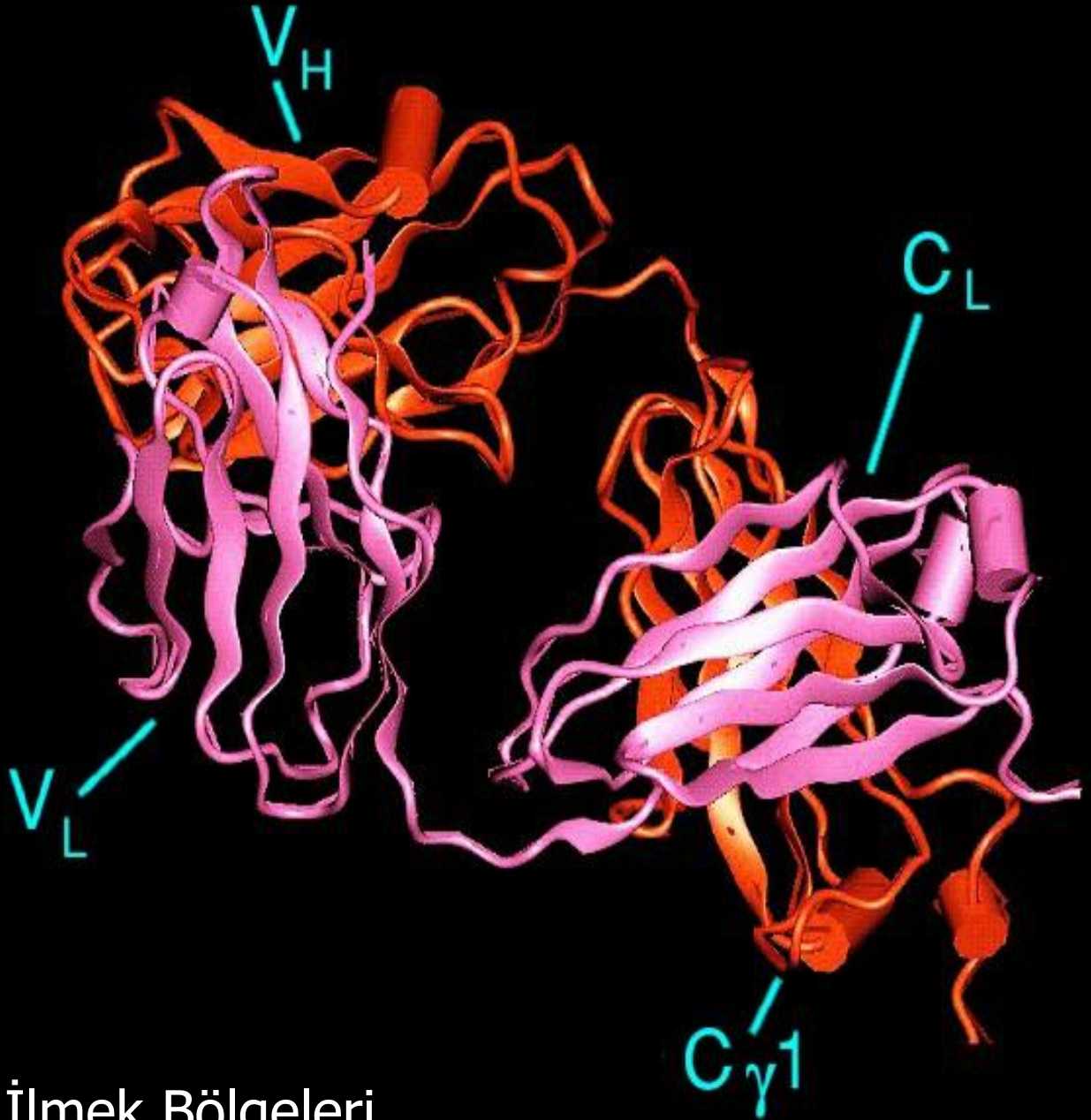
CH: ağır zincir sabit bölge  
VH: ağır zincir deęişken bölge  
VL: hafif zincir deęişken bölge  
CL: hafif zincir sabit bölge

# İmmunglobulin Molekölü

## İlmeK Bölgeleri

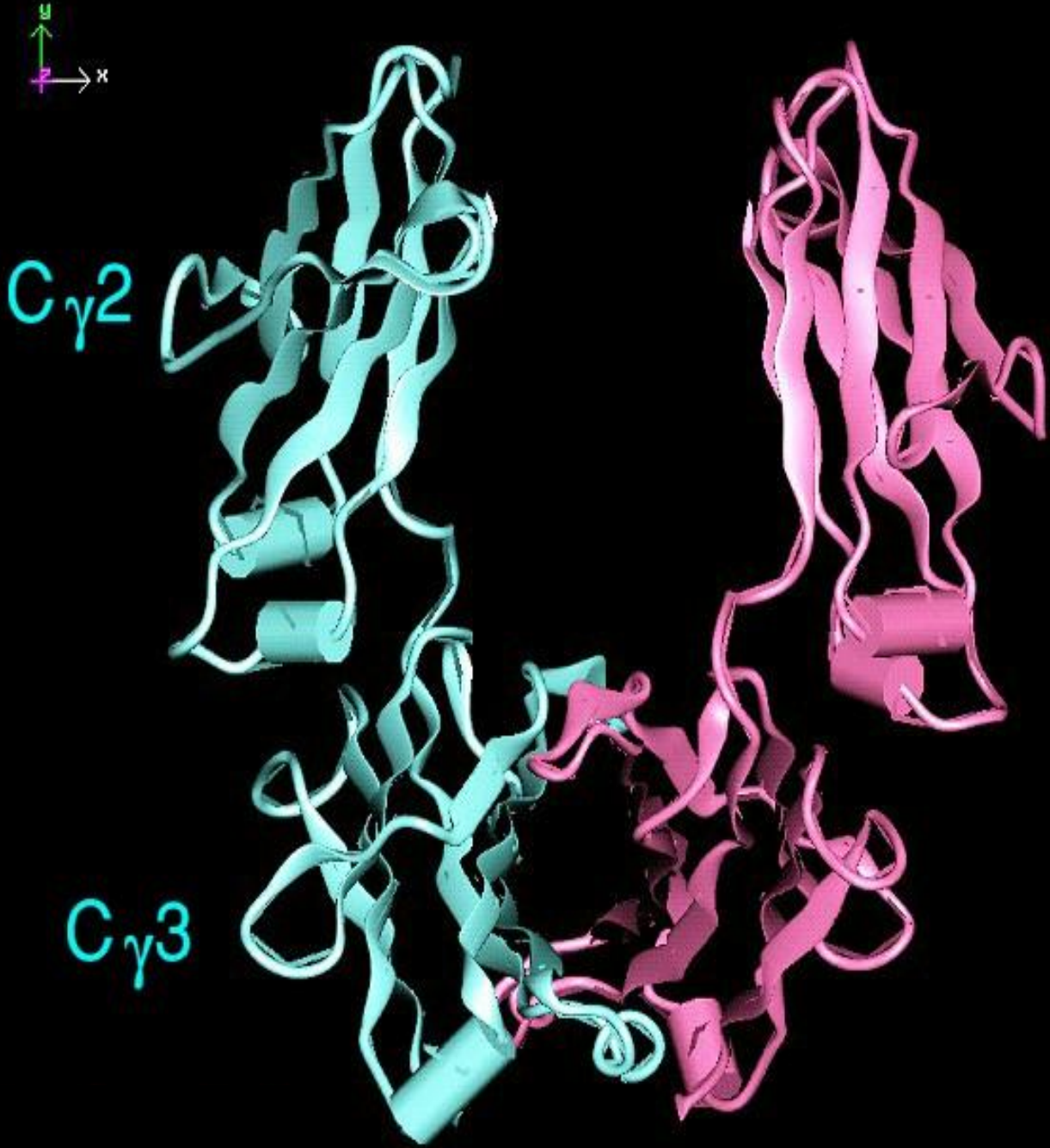


# İmmunglobulin Molekölü



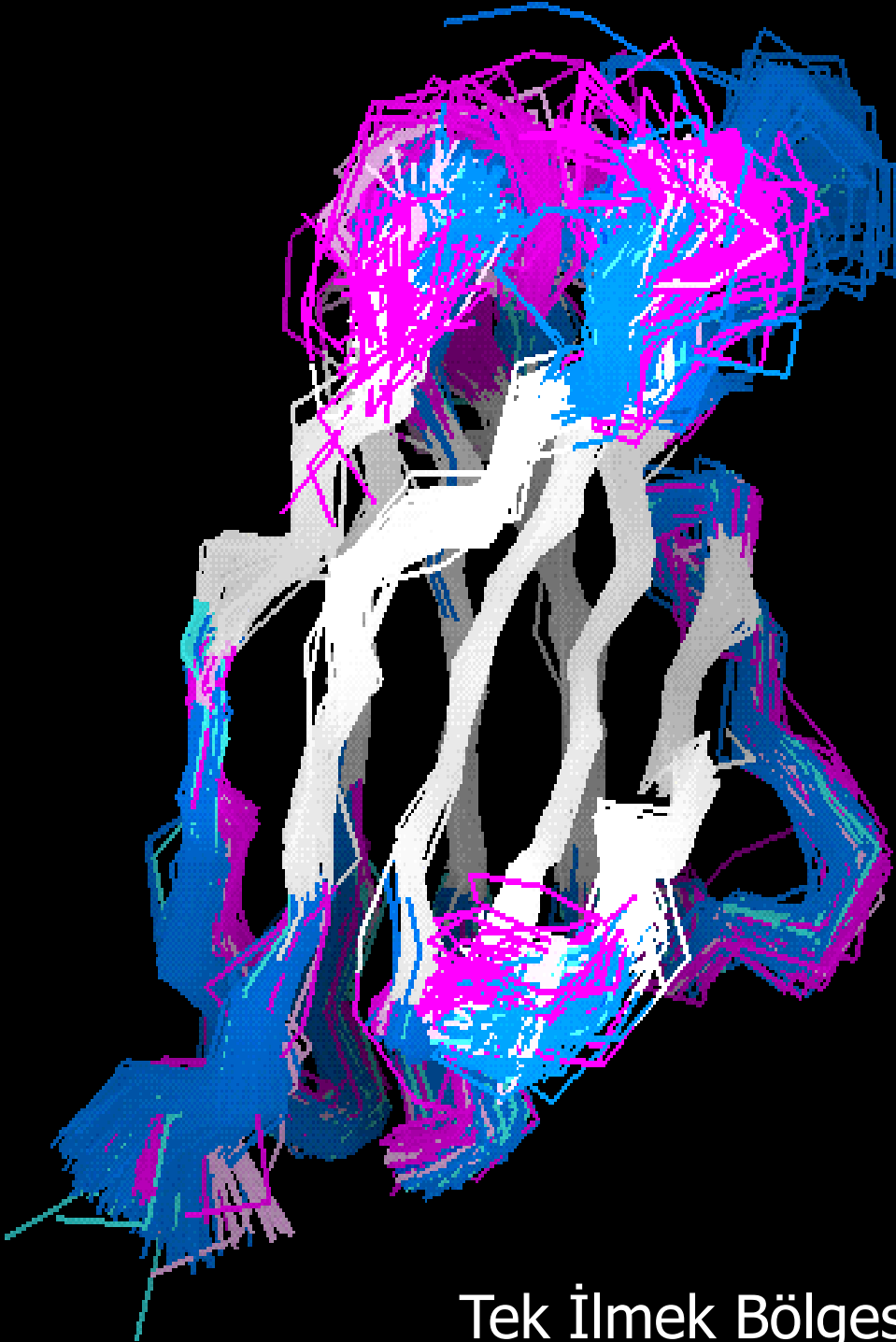
Fab İlmek Bölgeleri

# İmmunglobulin Molekölü



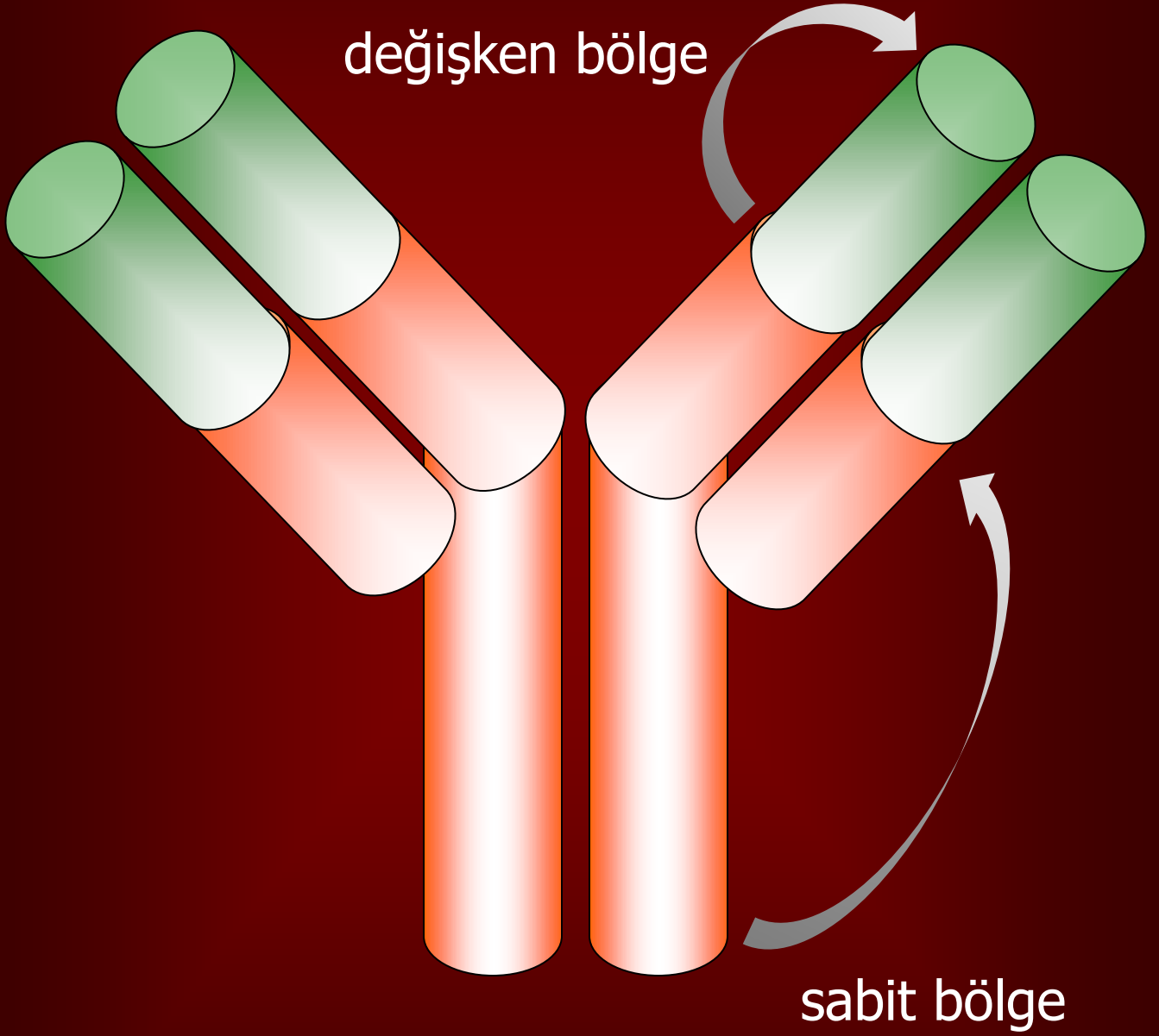
Fc İlmek Bölgeleri

# İmmunglobulin Molekülü



Tek İlmeç Bölgesi

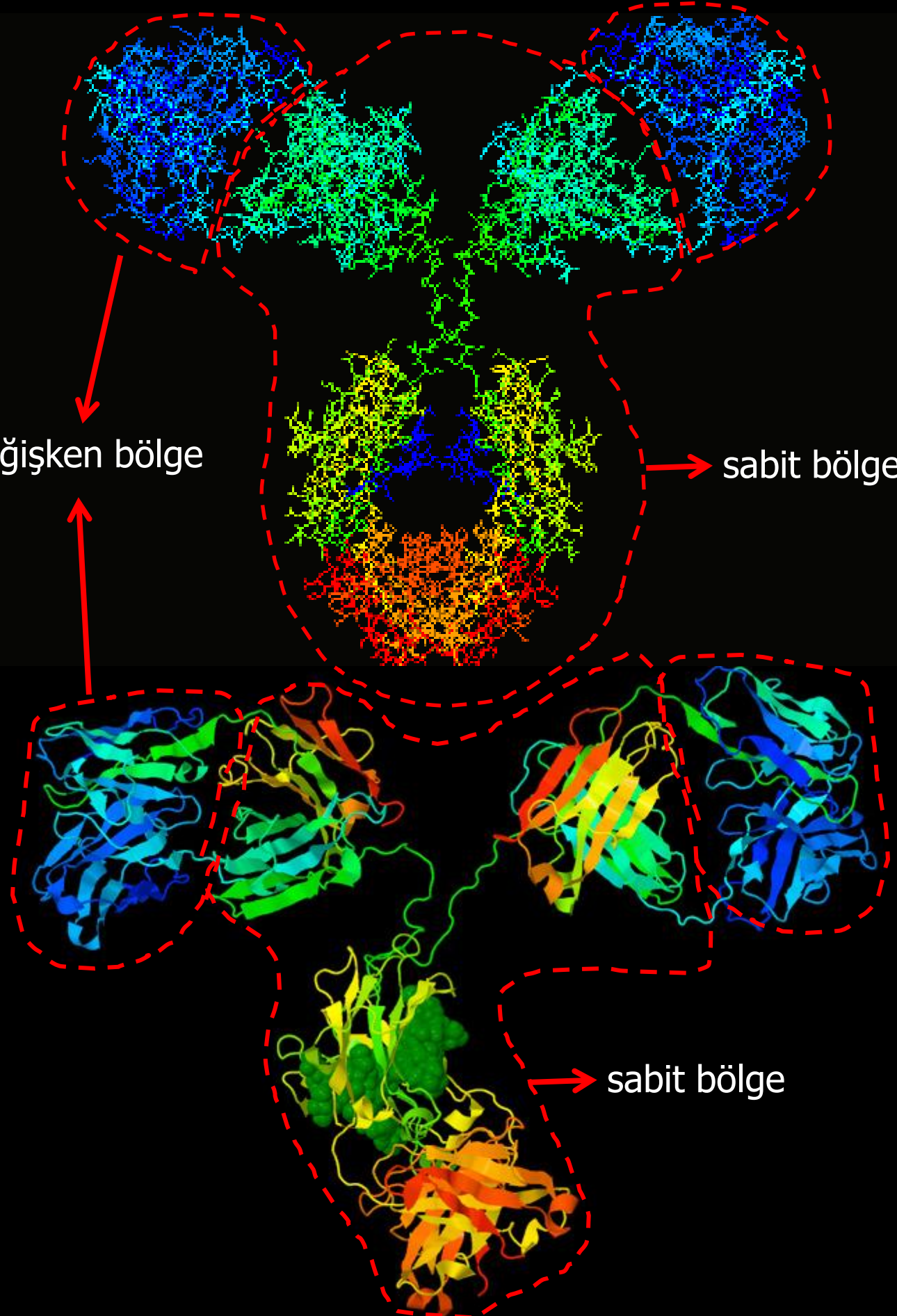
# İmmunglobulin Molekölü



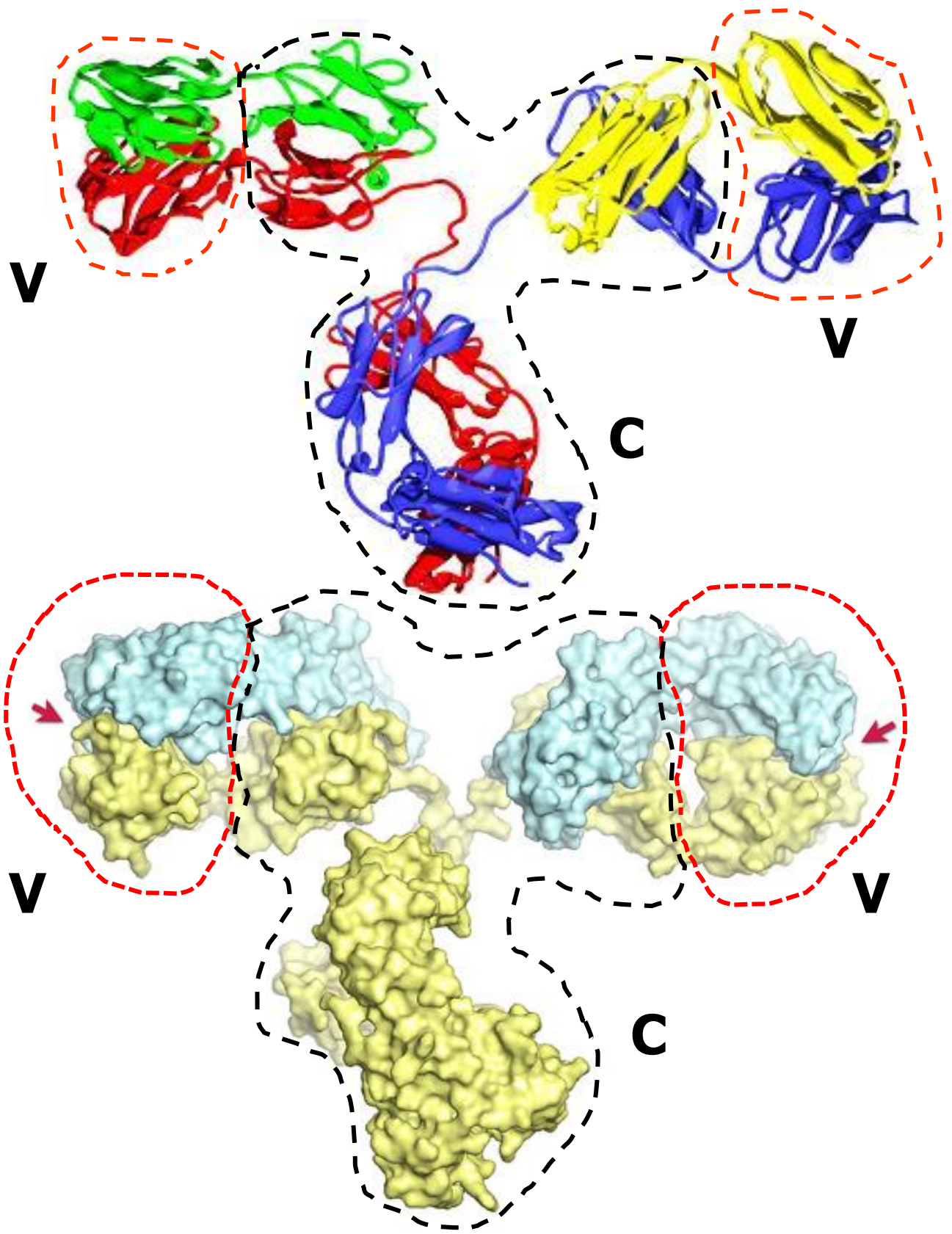
değişken bölge

sabit bölge

sabit bölge

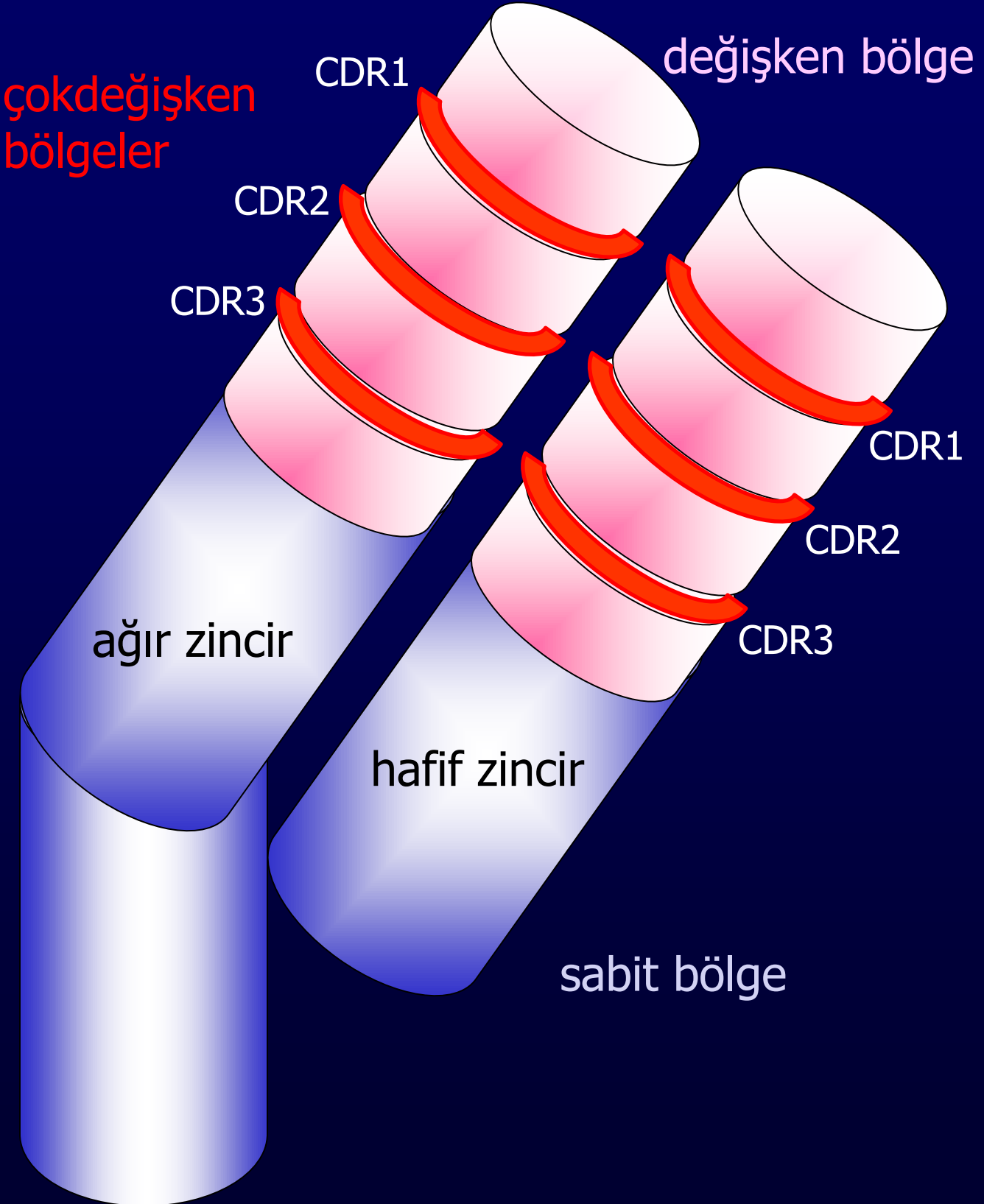


# İmmunglobulin Molekülü



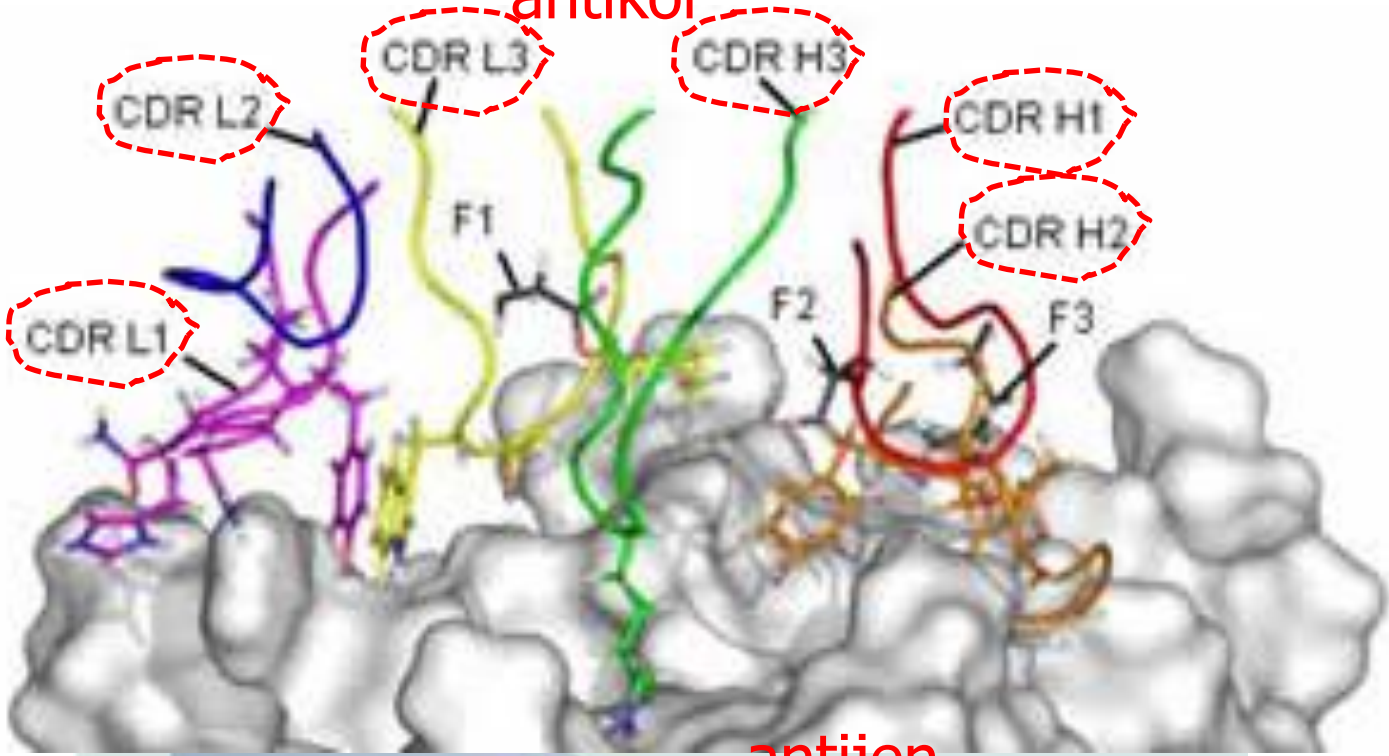


# İmmunglobulin Molekülü

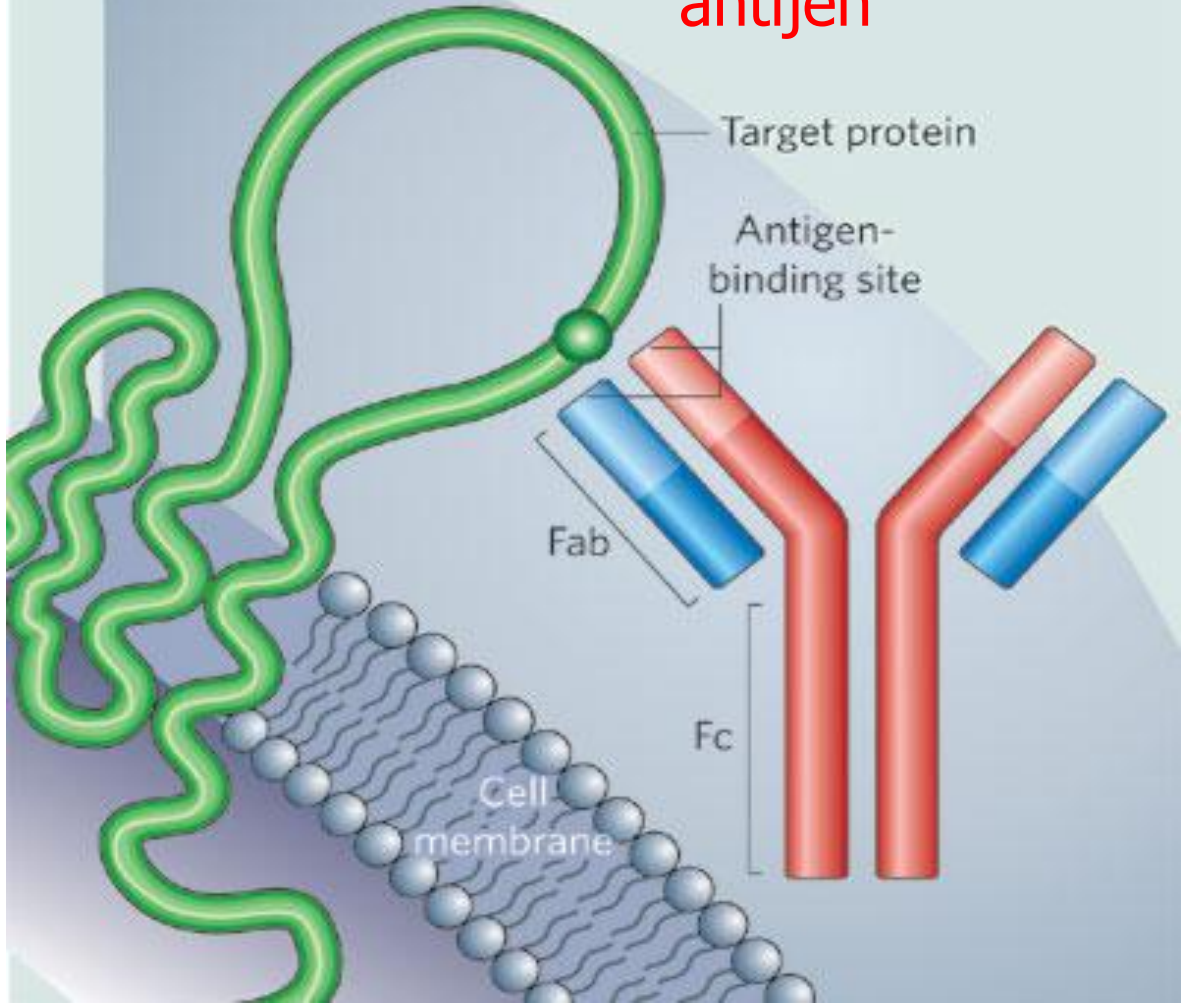


# çokdeğişken bölgeler

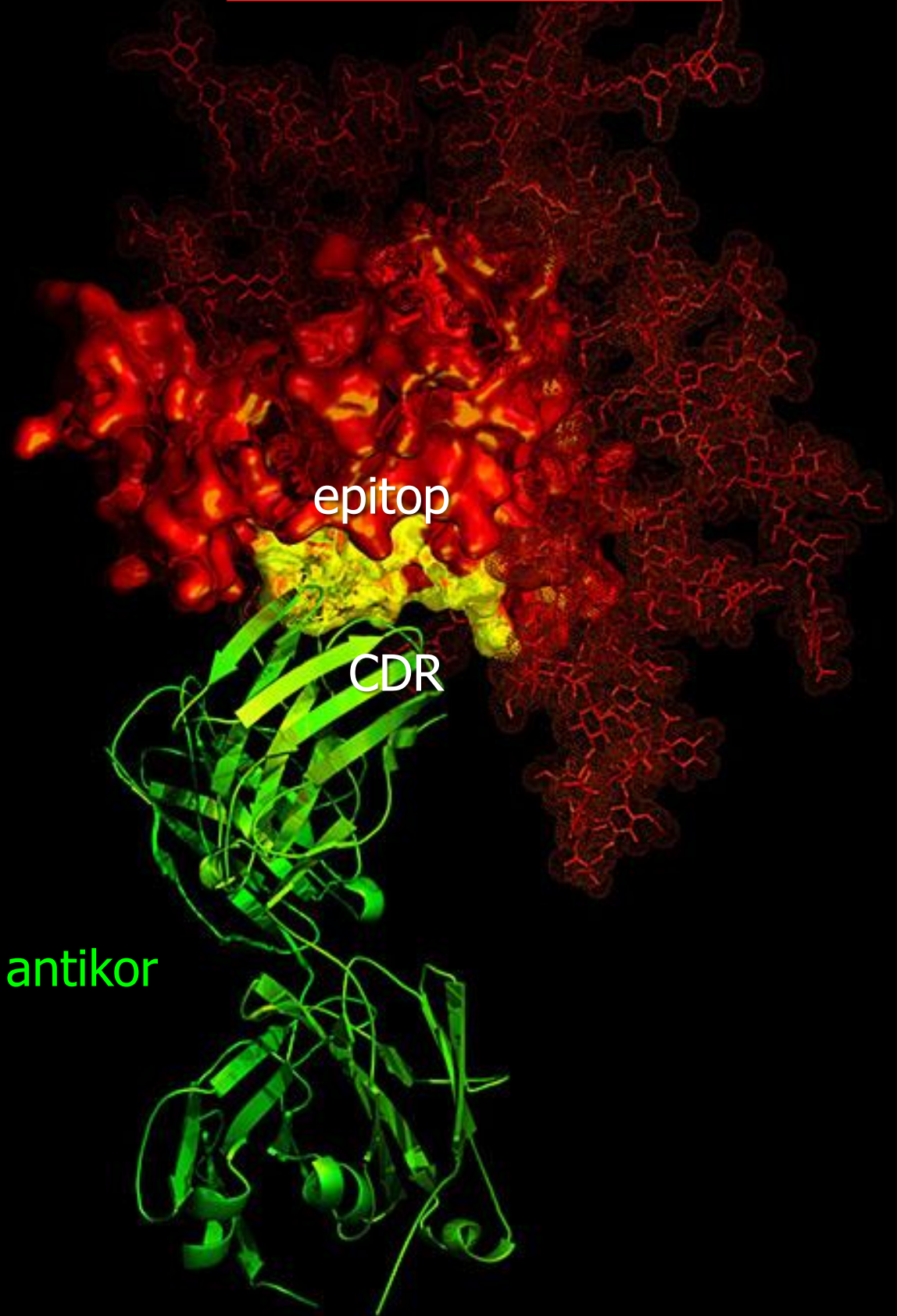
antikor

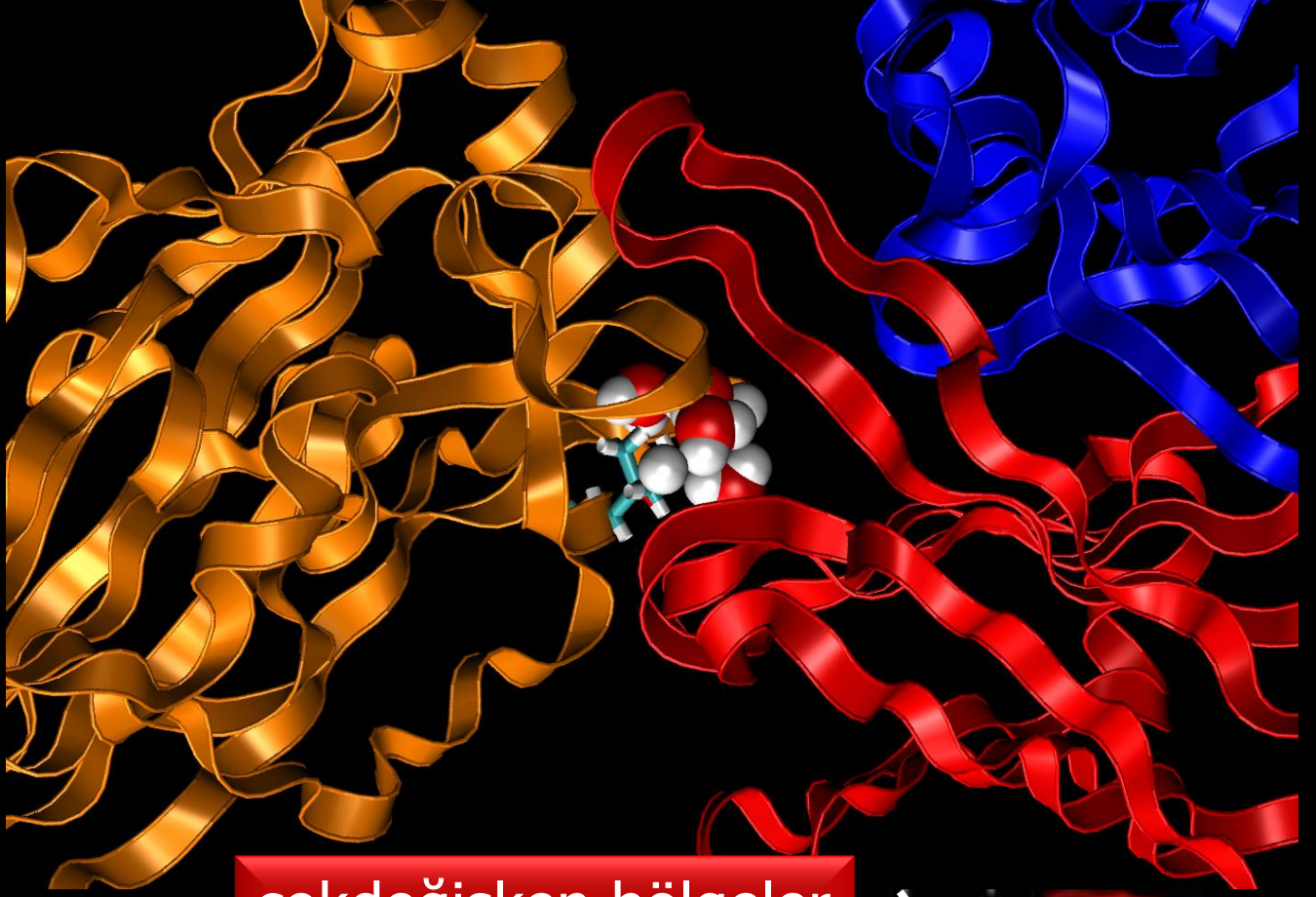


antijen

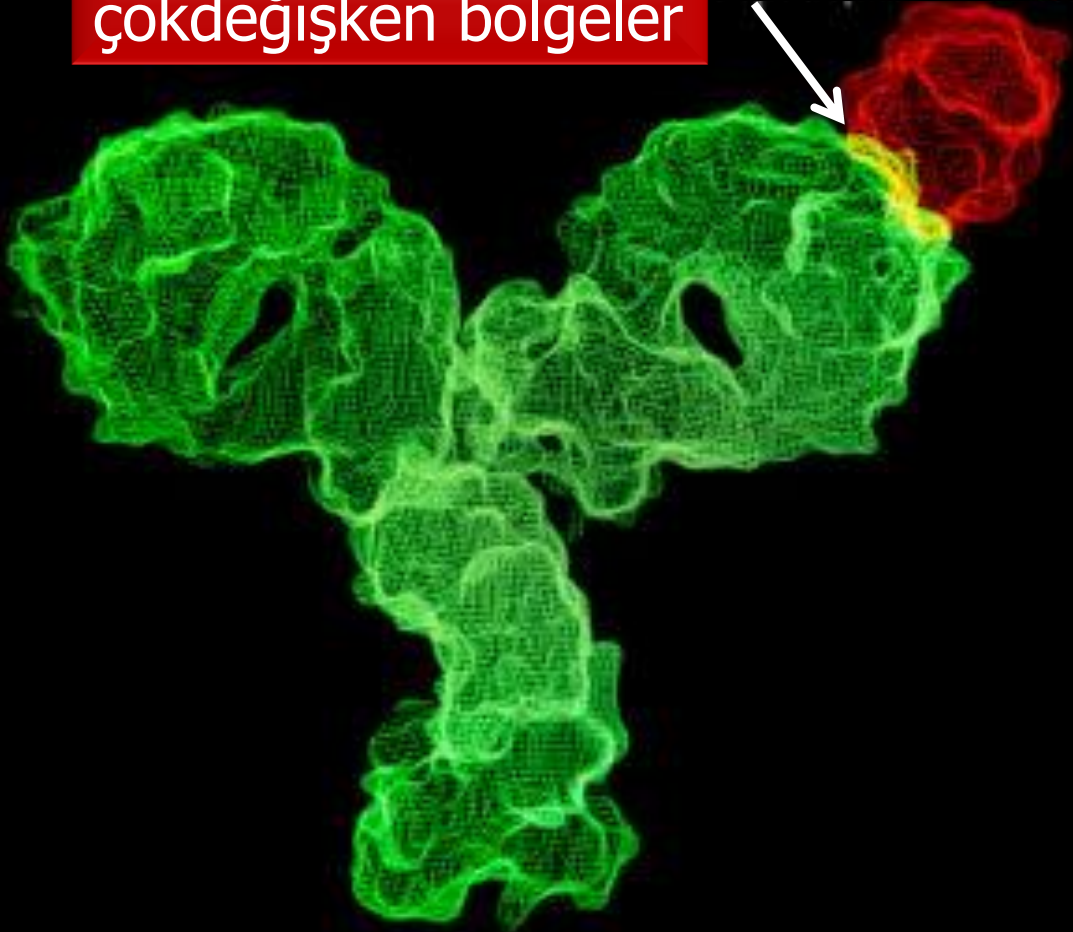


# çokdeğişken bölgeler

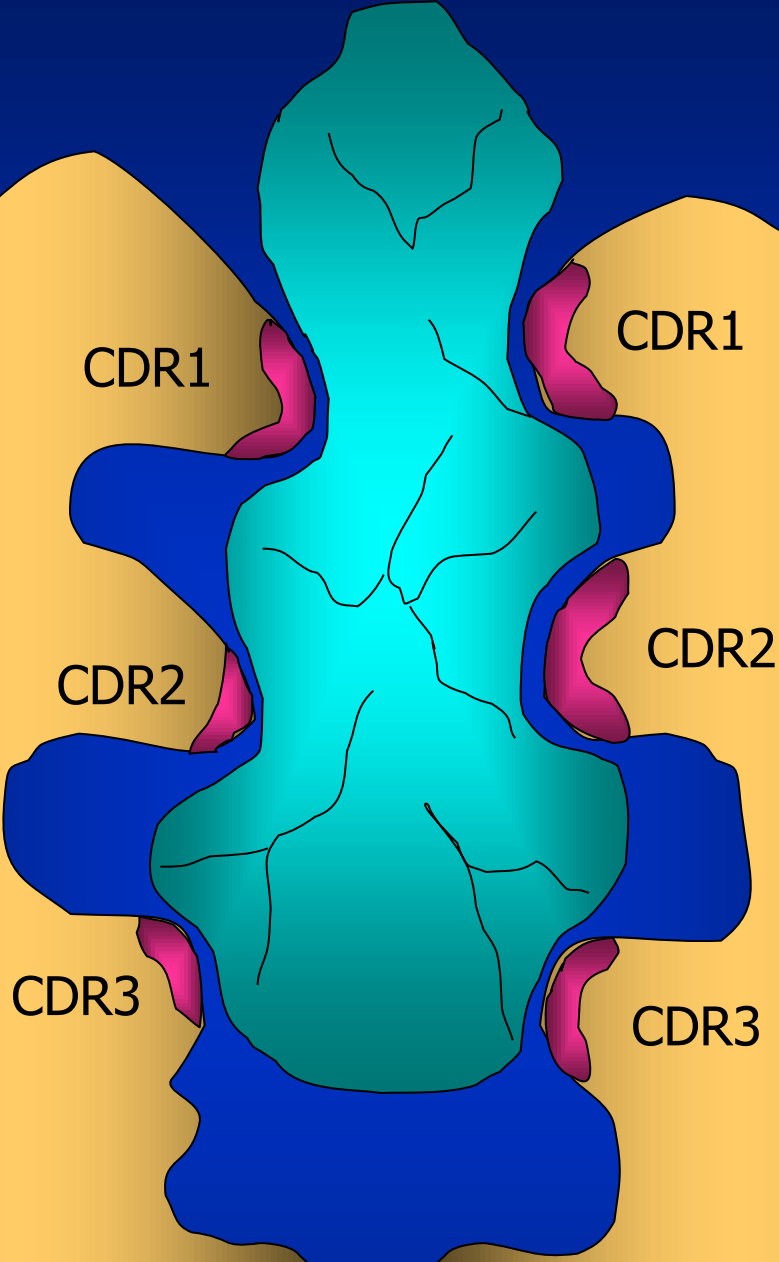


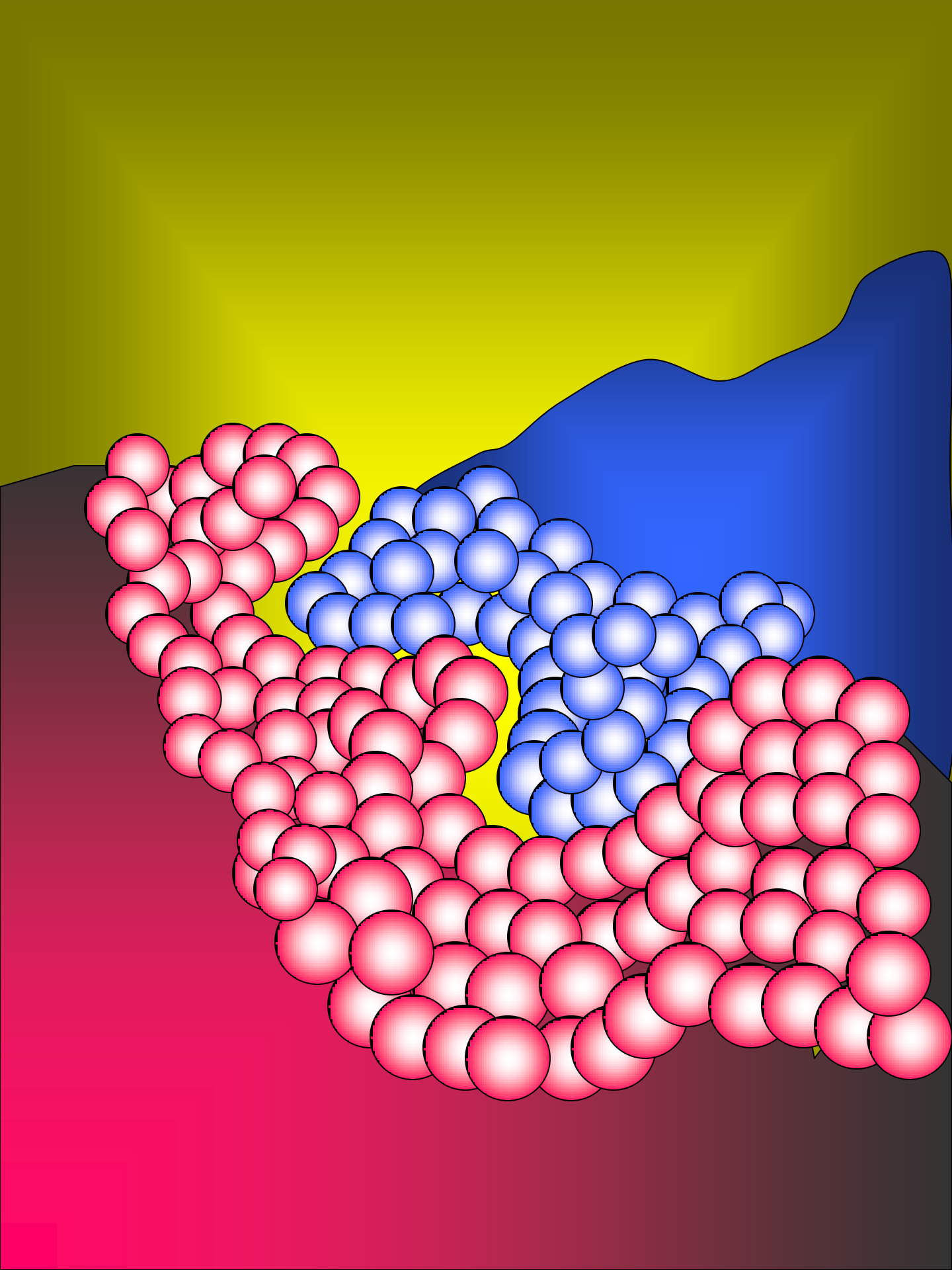


çokdeğişken bölgeler



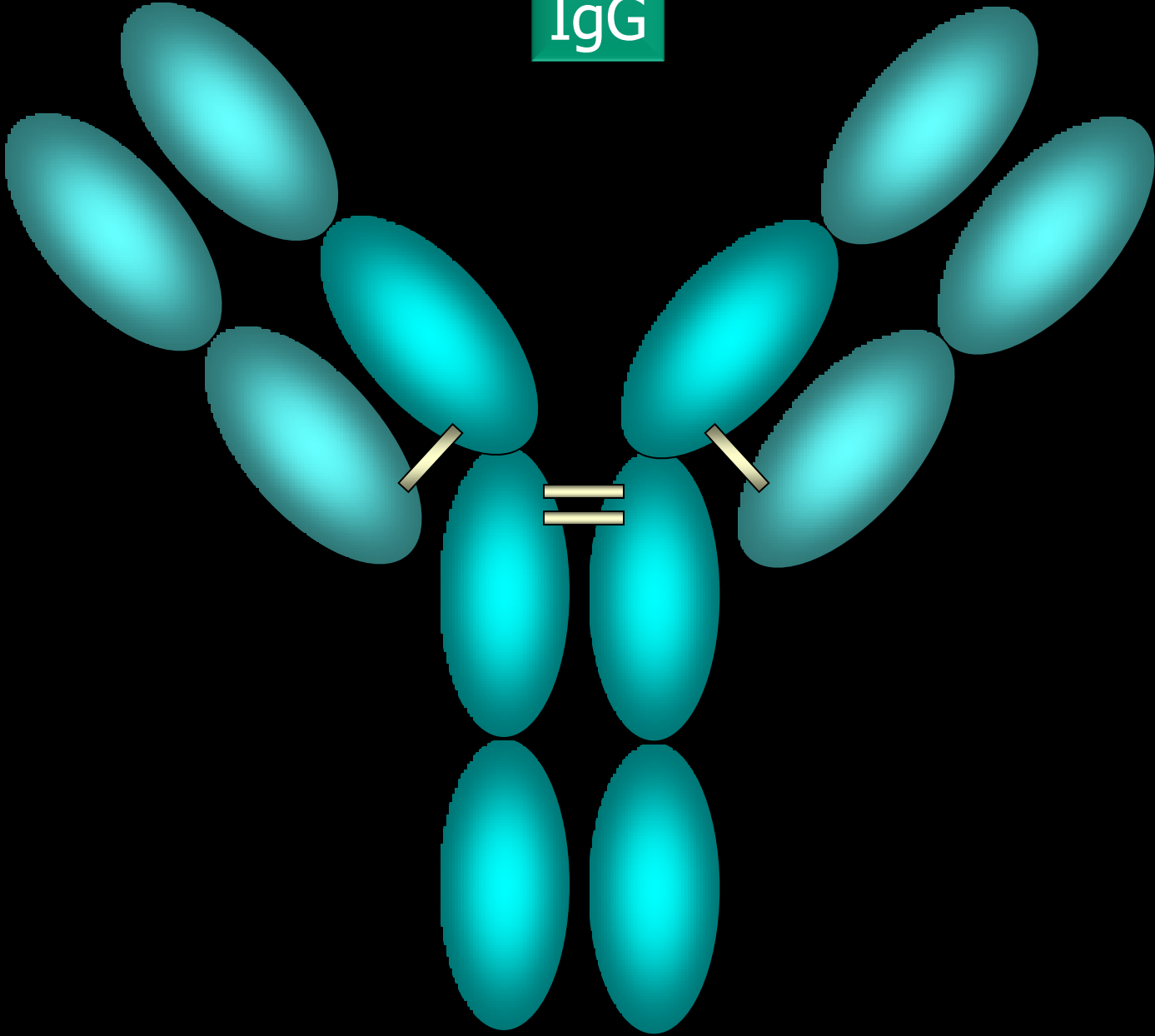
# çokdeğişken bölgeler



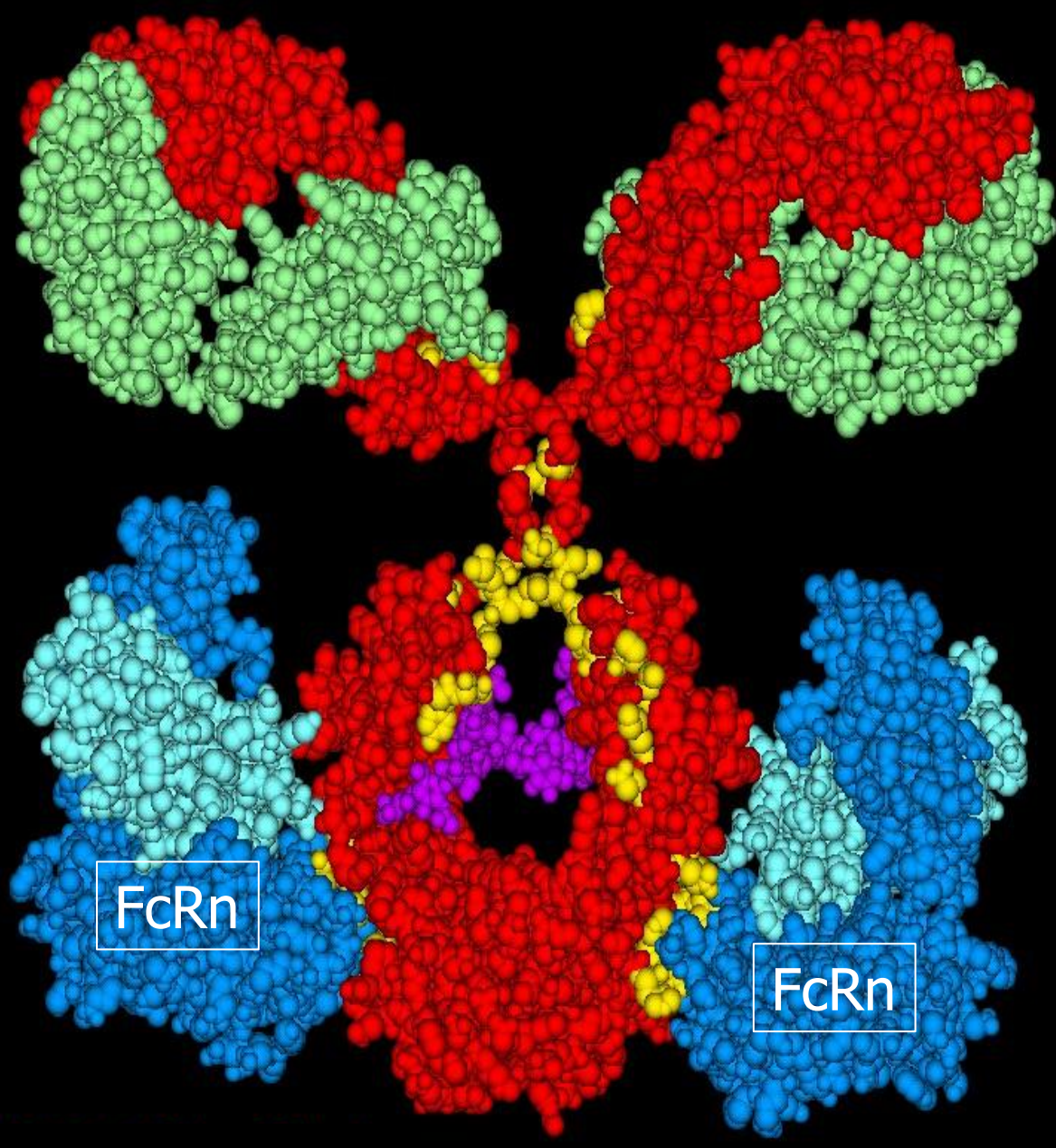


# İmmunglobulin Sınıfları

IgG



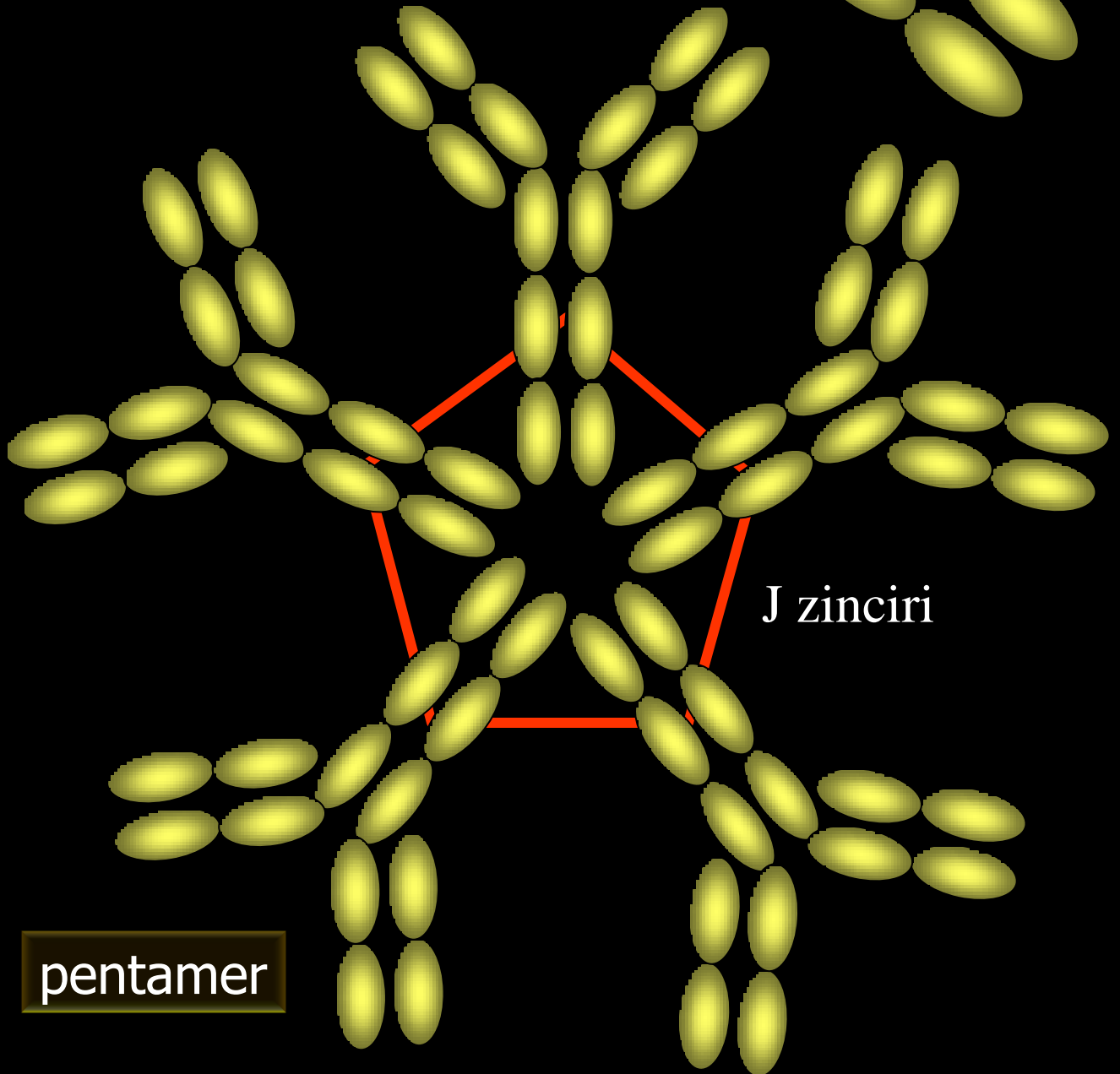
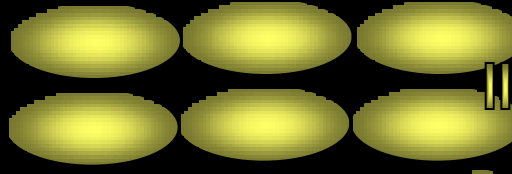
# İmmunglobulin Sınıfları **IgG**





# İmmunglobulin Sınıfları **IgM**

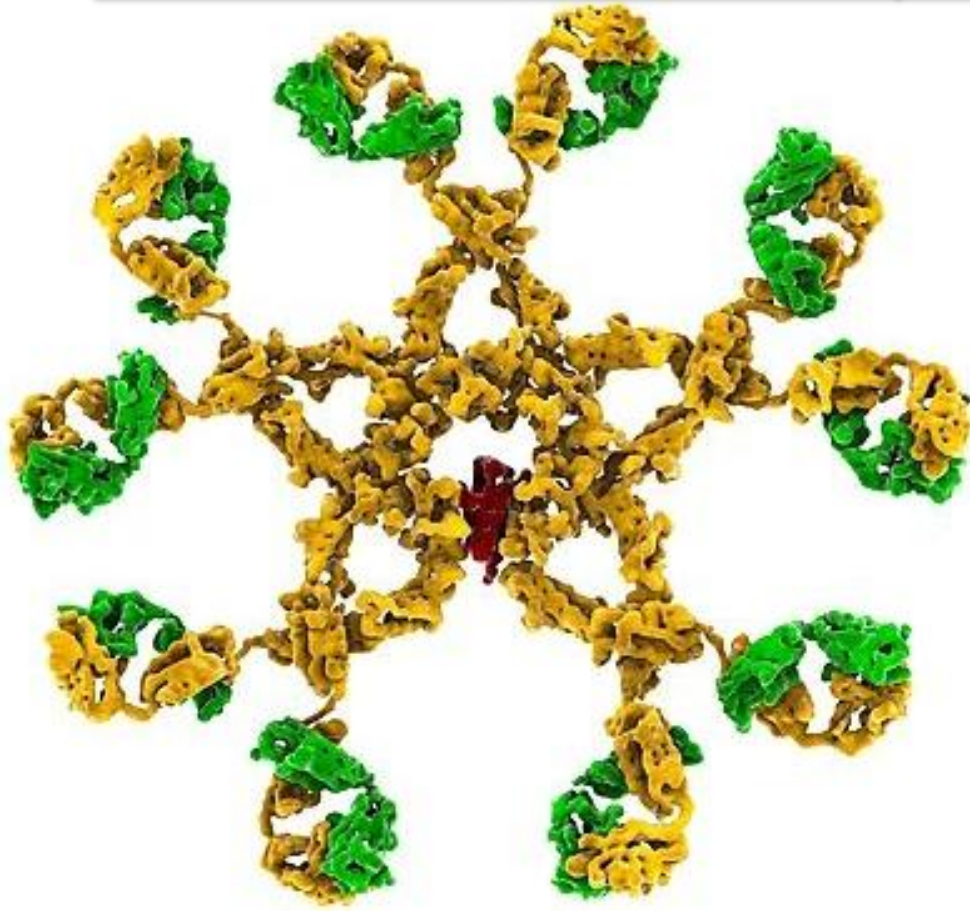
monomer



J zinciri

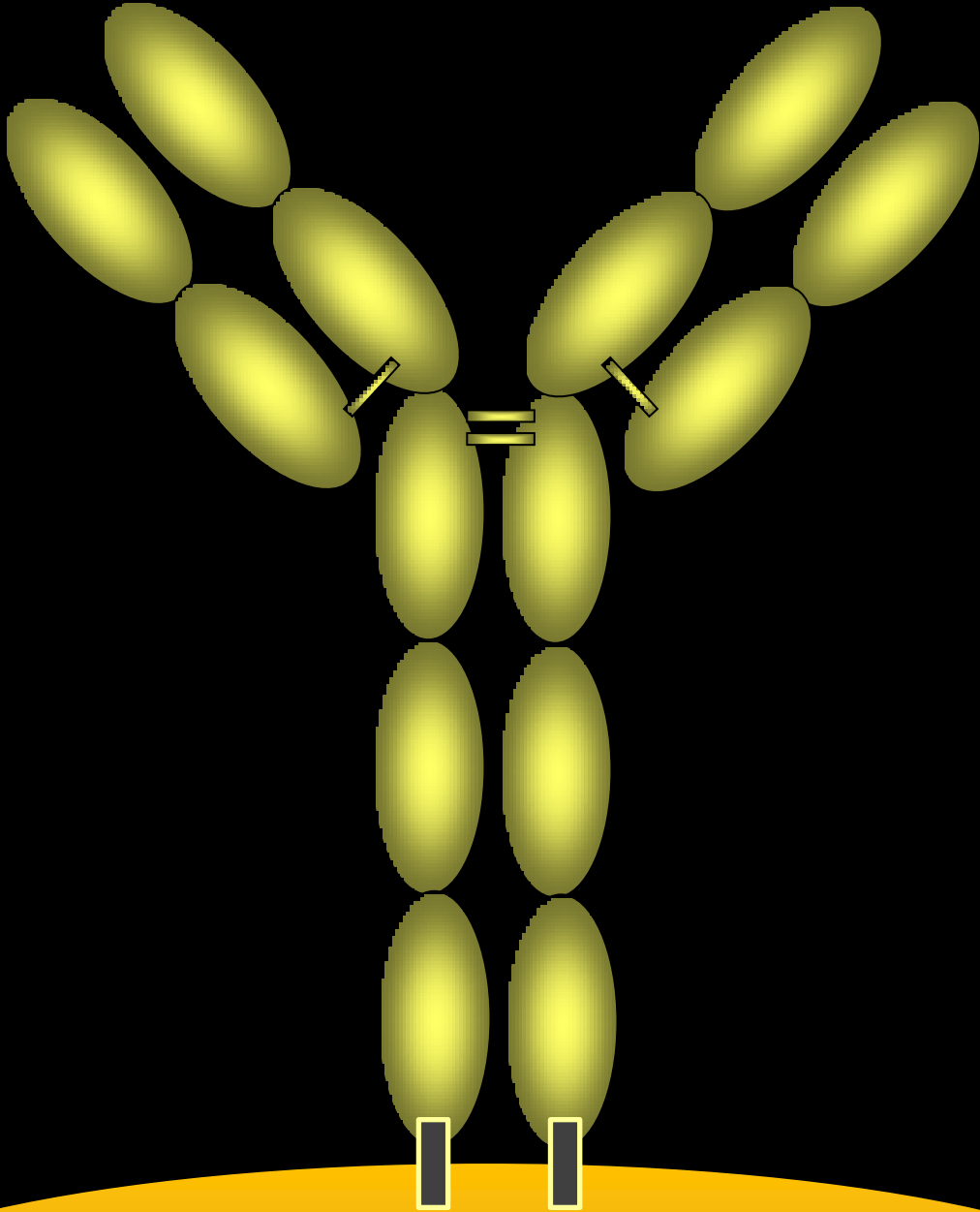
pentamer

# İmmunglobulin Sınıfları IgM



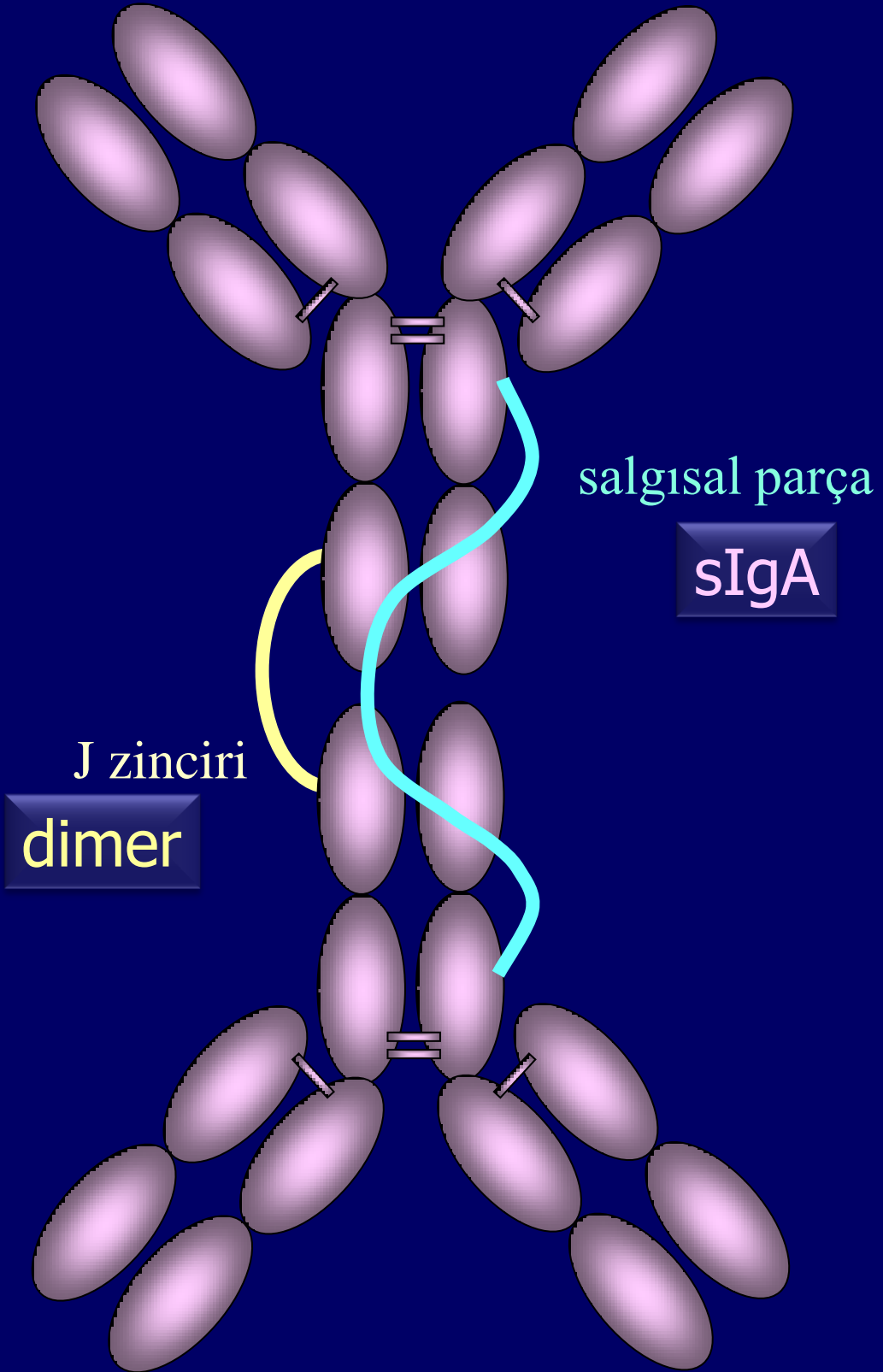
# İmmunglobulin Sınıfları IgM

monomer form

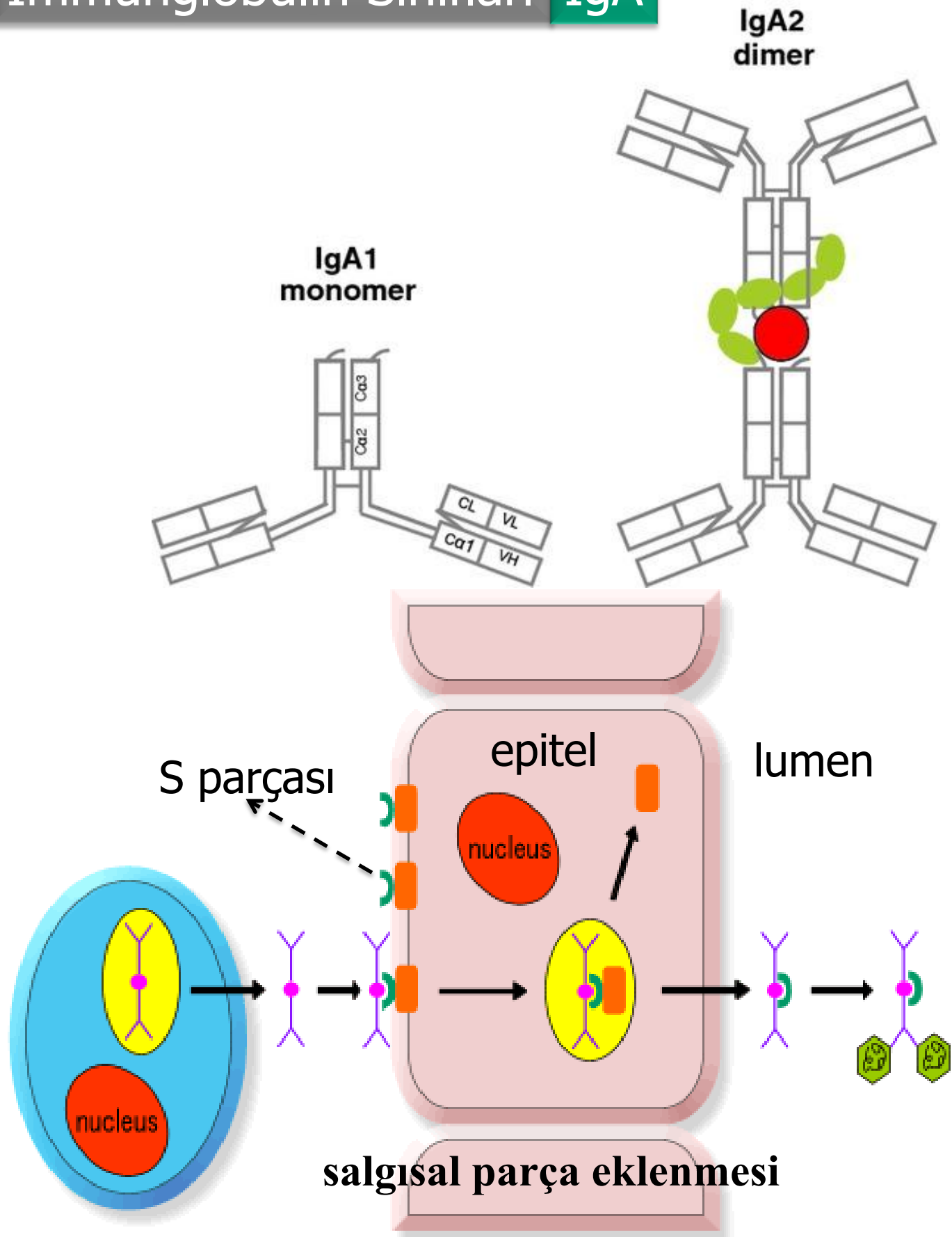


B hücre reseptörü

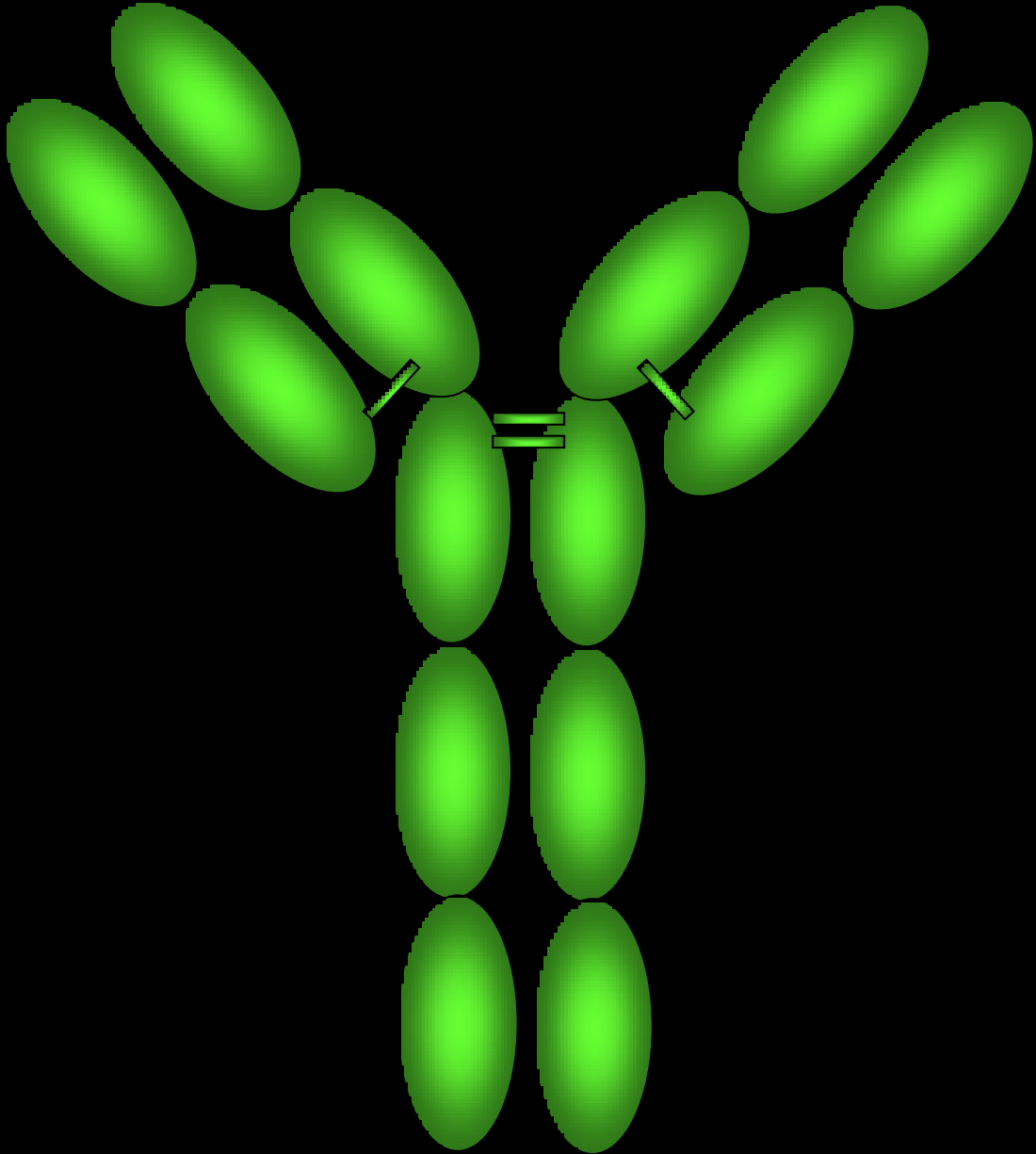
# İmmunglobulin Sınıfları **IgA**



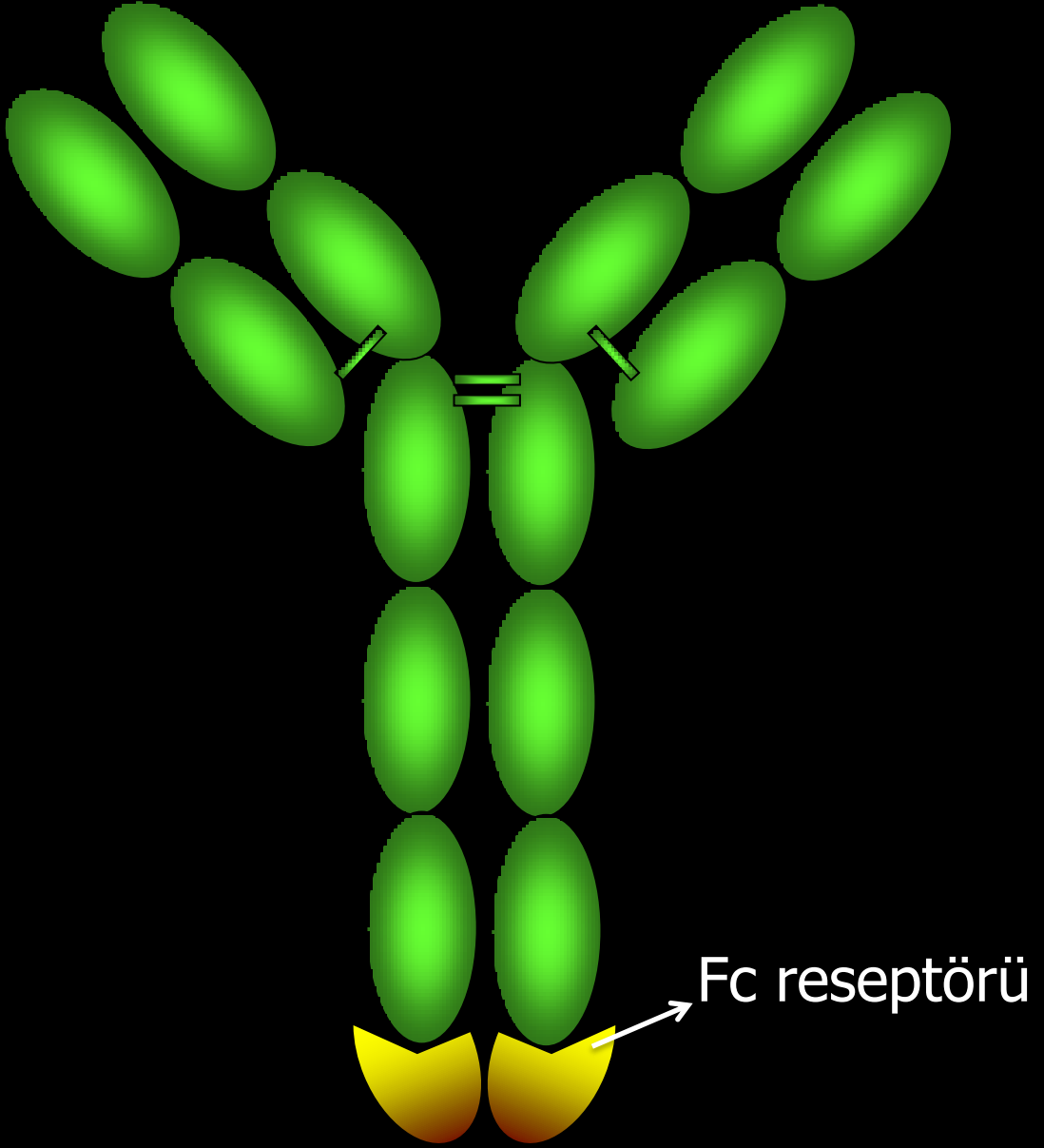
# İmmunglobulin Sınıfları **IgA**



# İmmunglobulin Sınıfları **IgE**

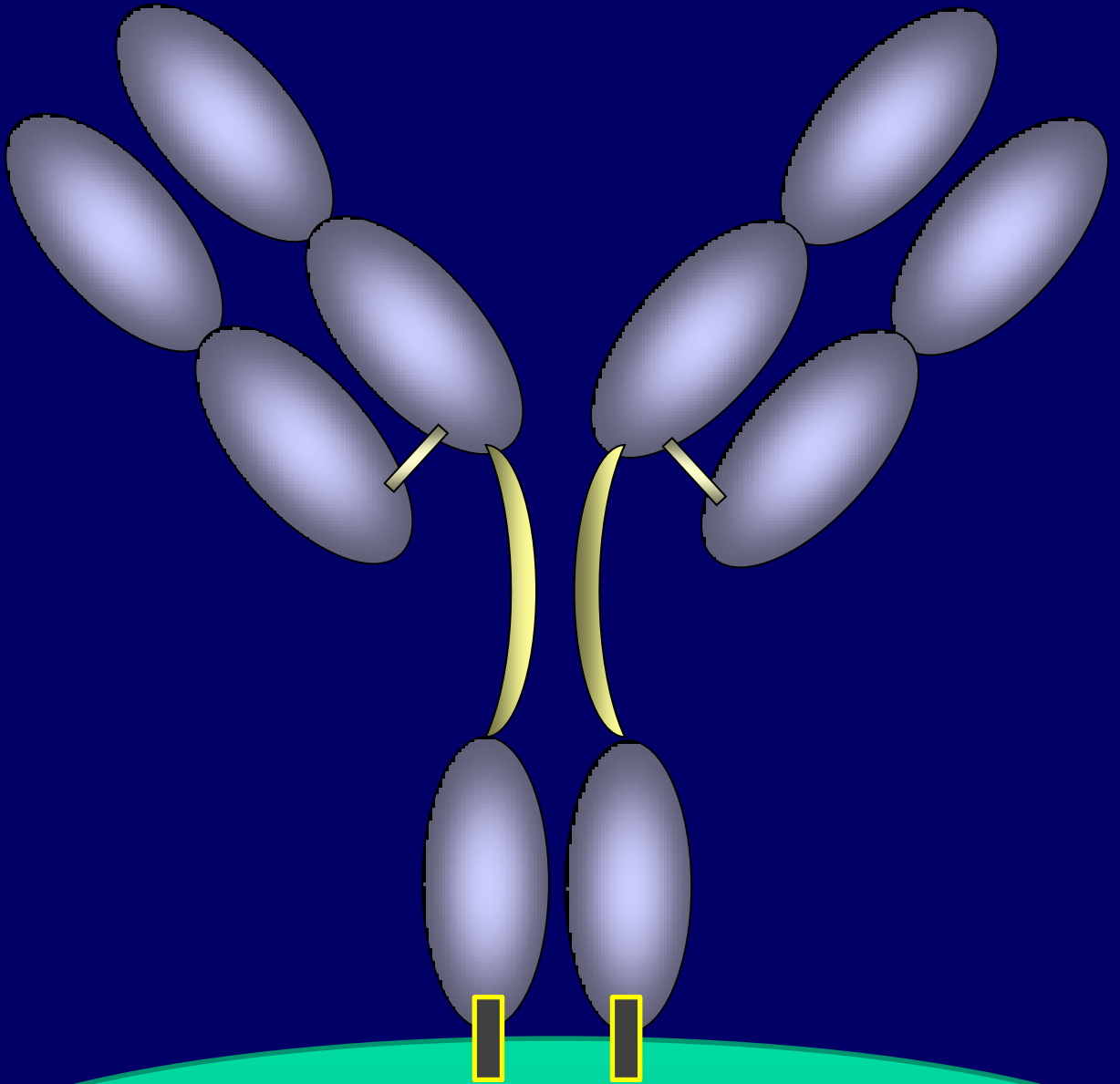


# İmmunglobulin Sınıfları **IgE**



Bazofil - Mast hücresi

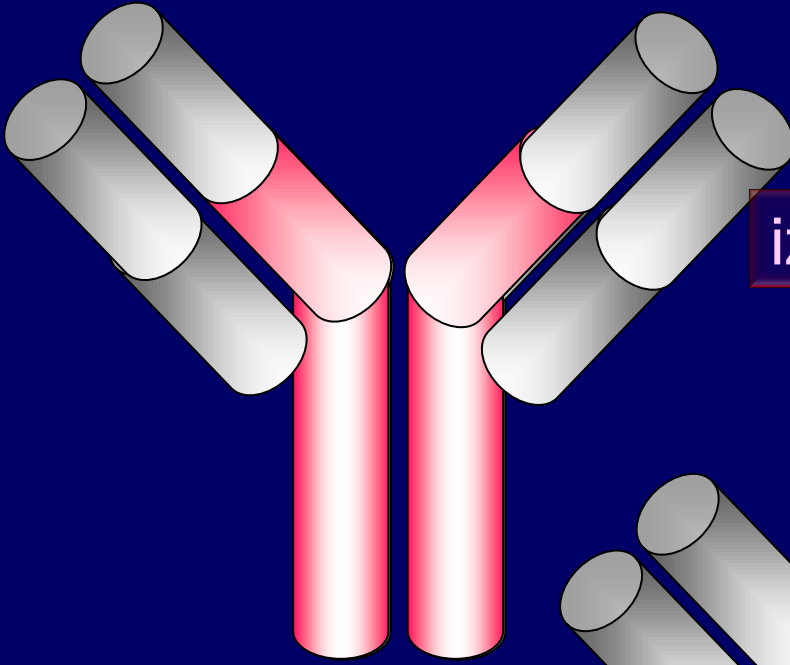
# İmmunglobulin Sınıfları IgD



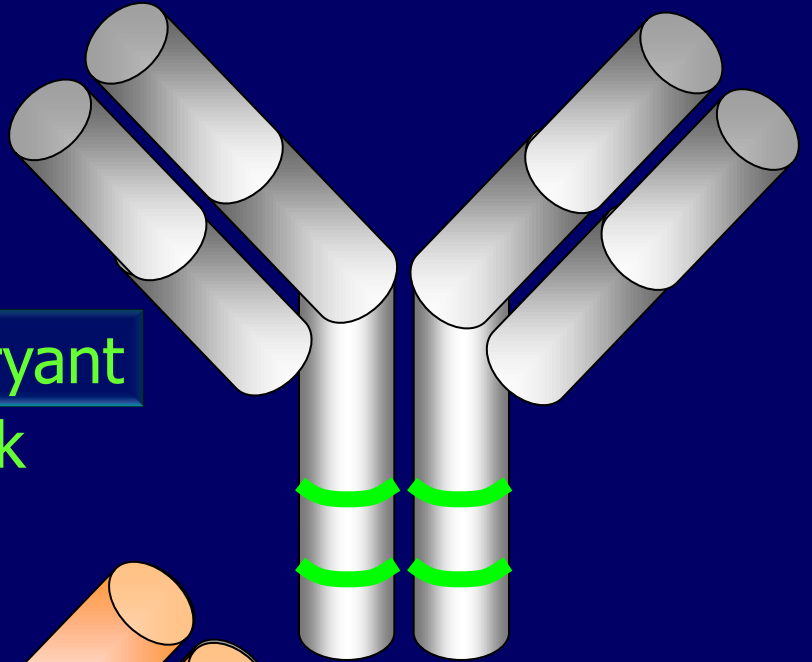
B hücre reseptörü



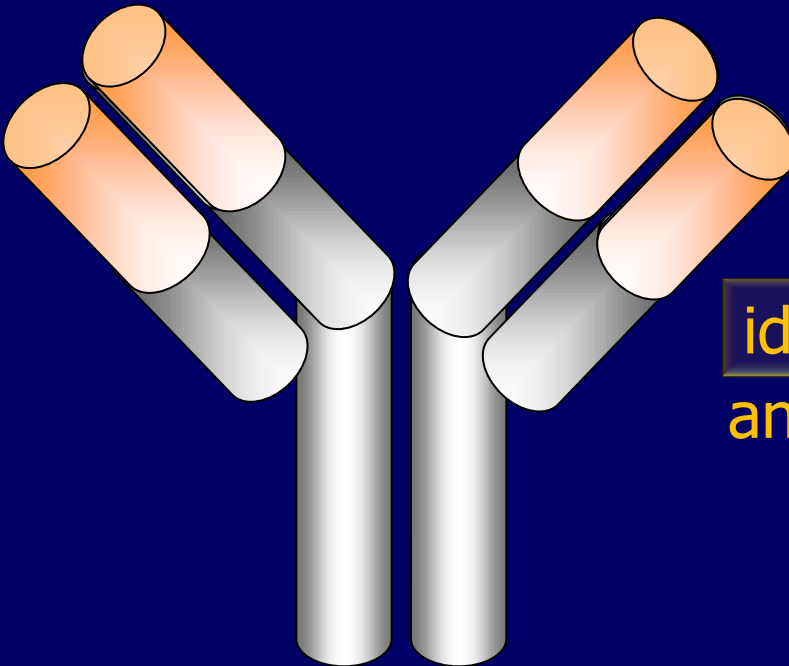
# İmmunglobulin Varyantları



izotipik varyant  
Ig sınıfları

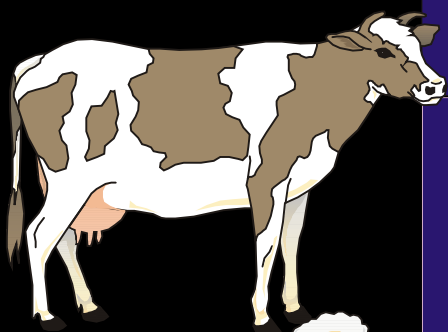


Allotipik varyant  
önemi yok



idiotipik varyant  
antijene spesifite

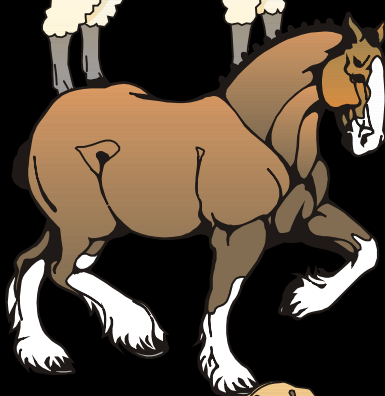
IgG IgM IgA IgE IgD



G1	M	A	E	—
G2				
G3				



G1	M	A1	E	—
G2		A2		
G3				



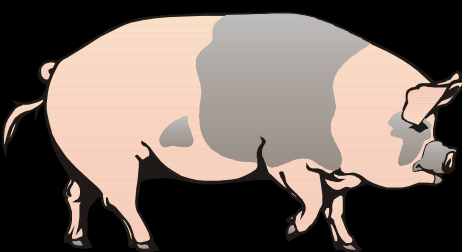
Ga	M	A	E	—
Gb				
Gc				
G(T)				



G1	M	A	E1	D
G2			E2	
G3				
G4				

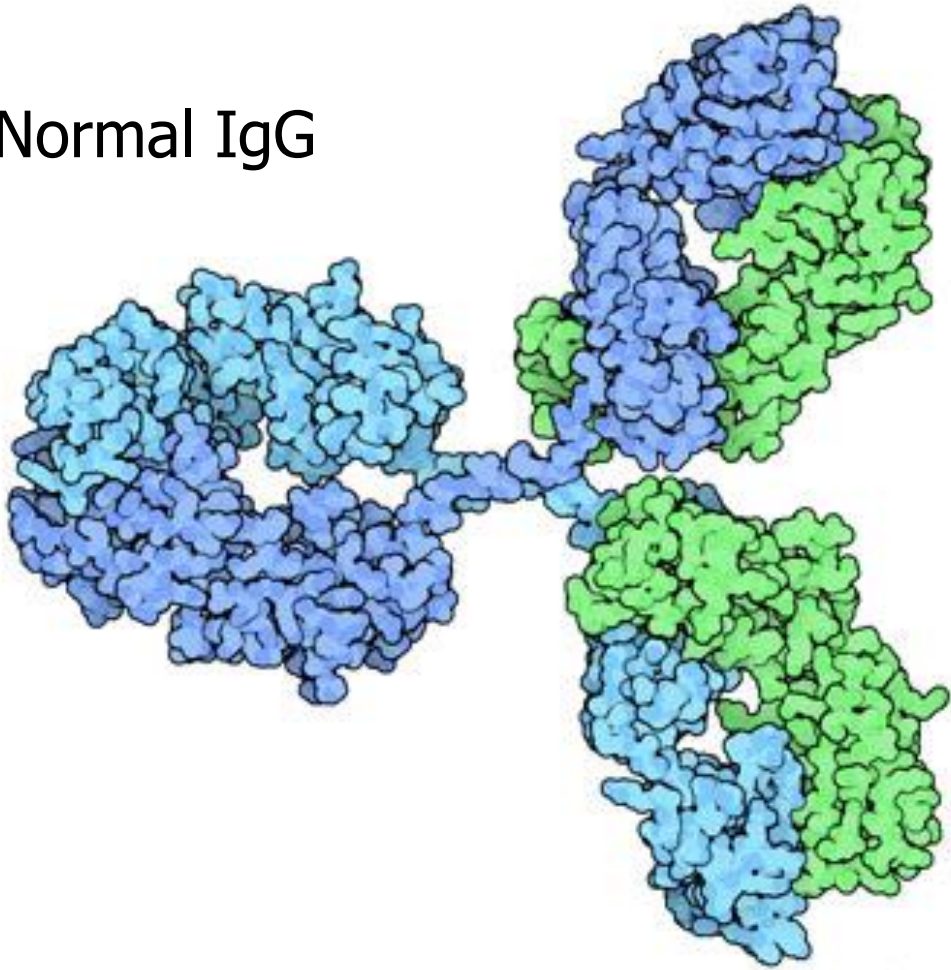


G1	M	A1	E	—
G2		A2		
G3				
G4				

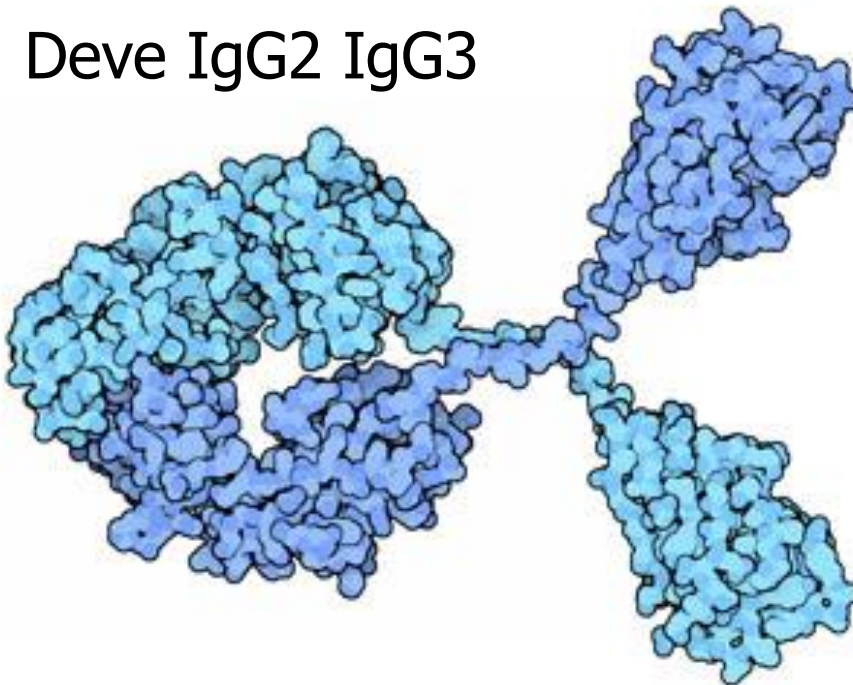


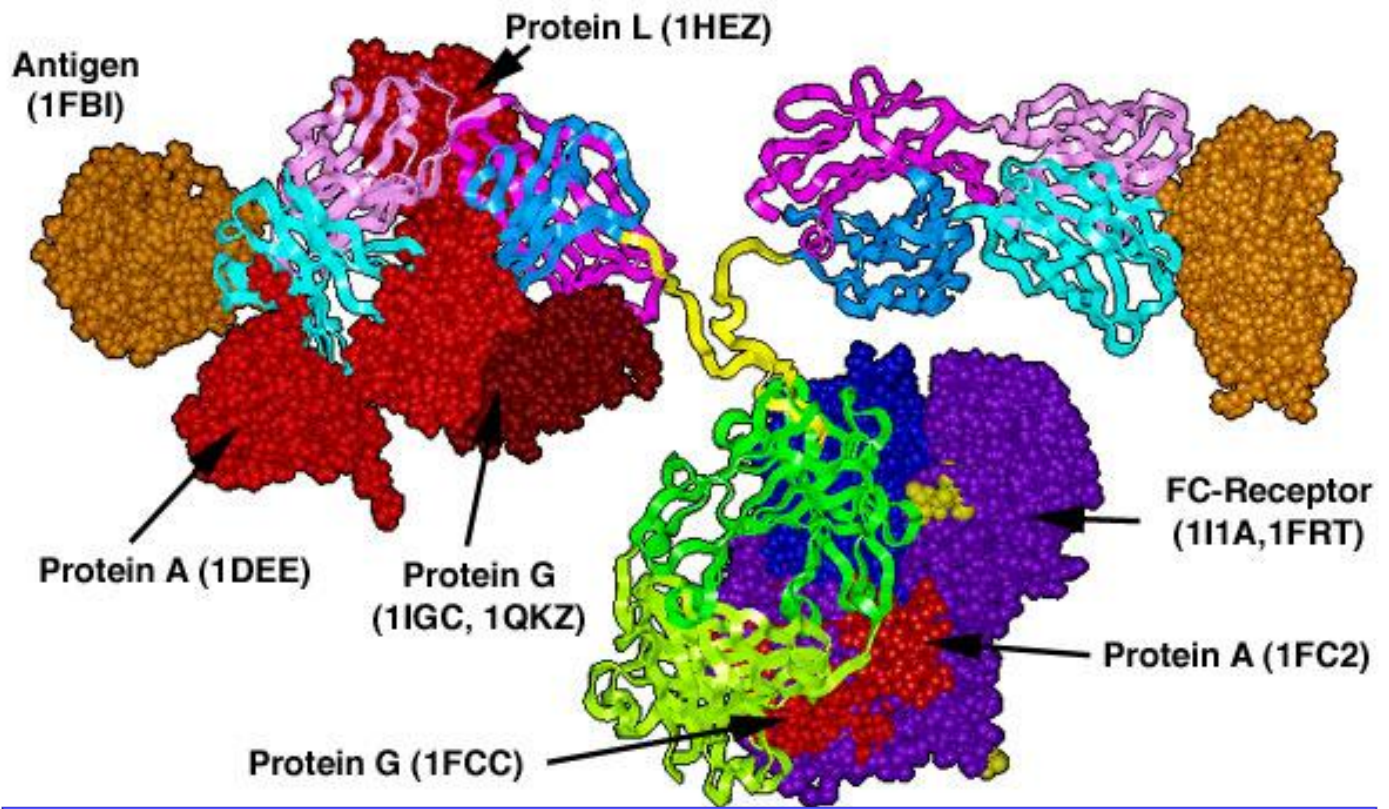
G1	M	A1	E	—
G2		A2		
G3				
G4				

Normal IgG

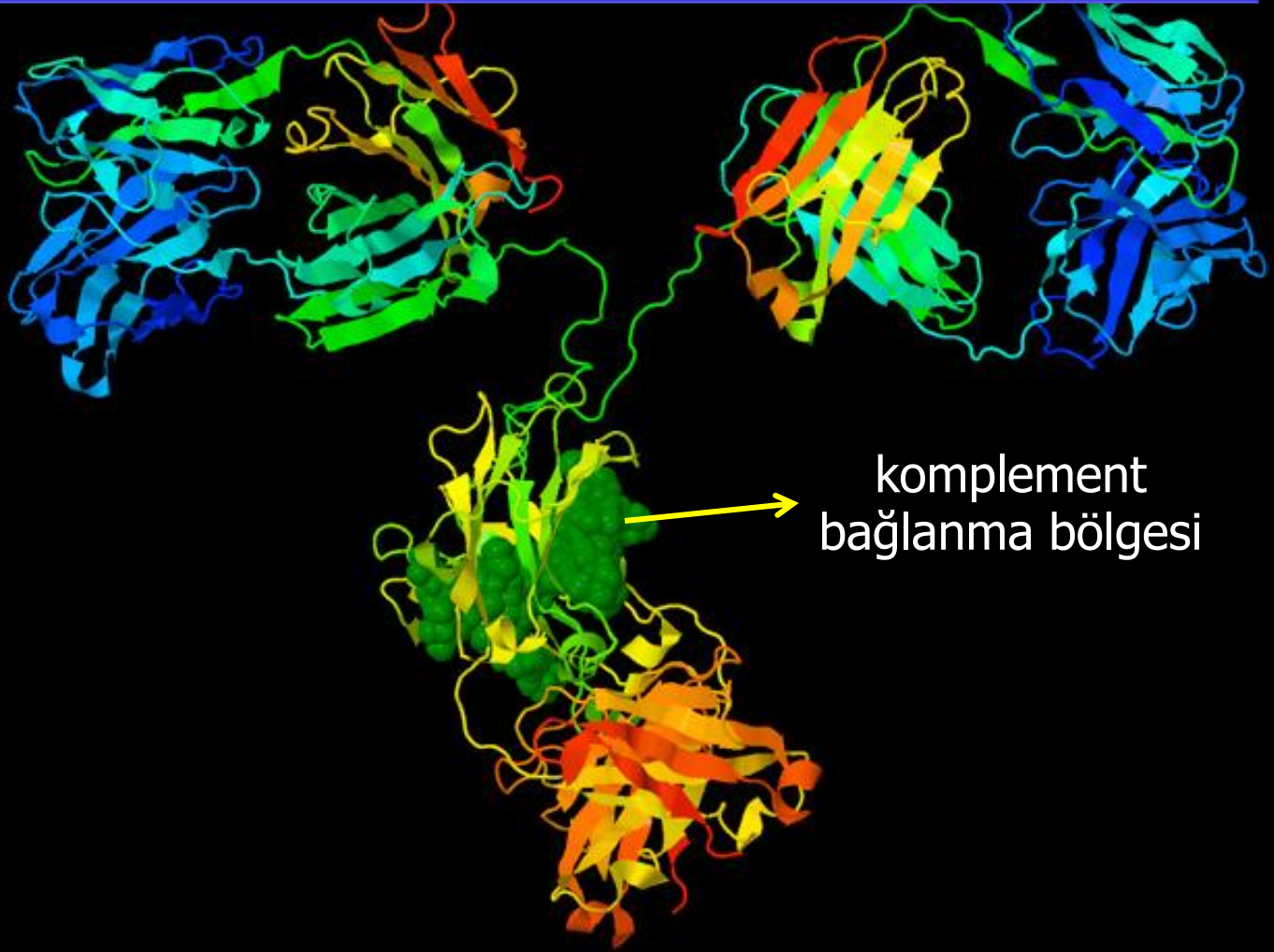


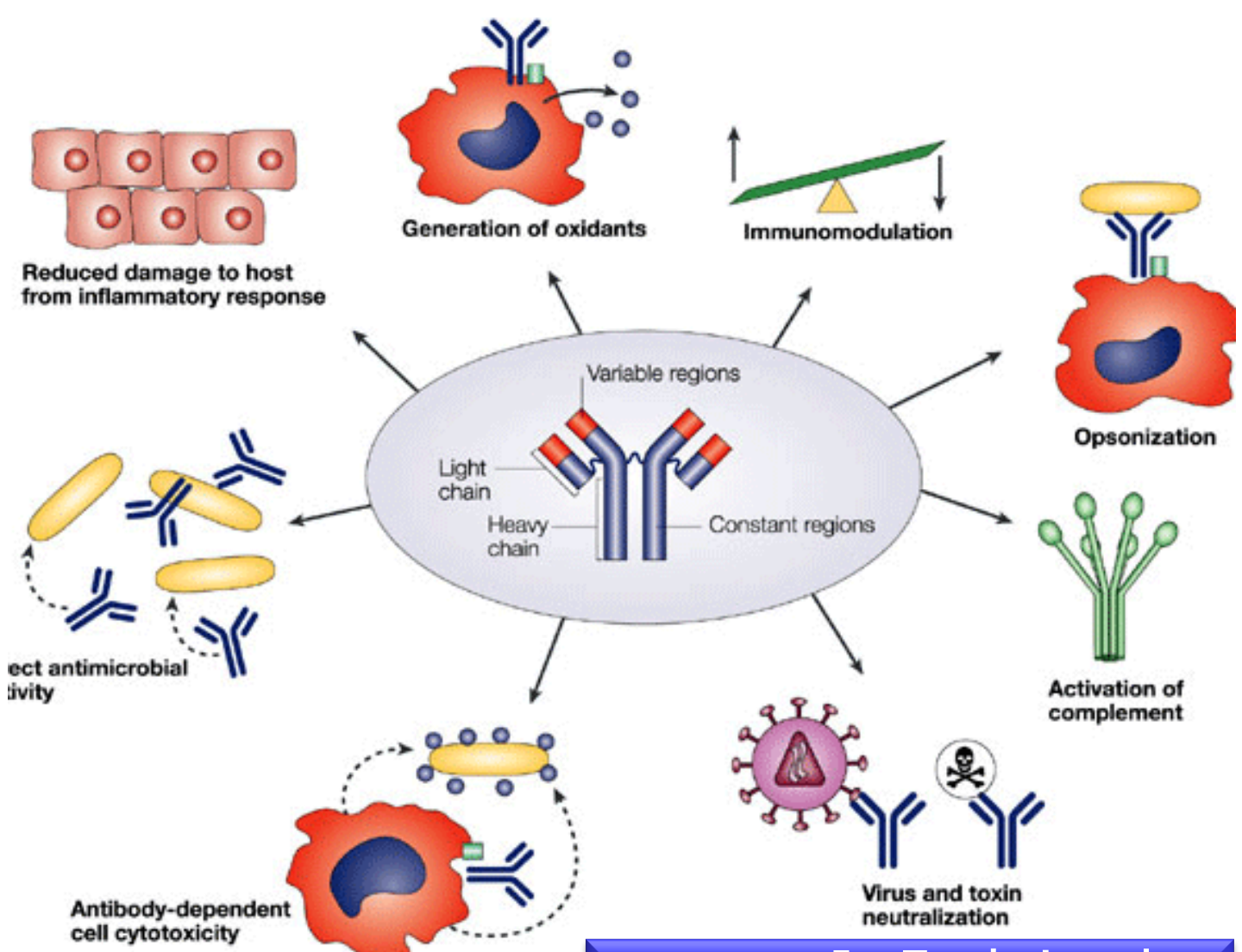
Deve IgG2 IgG3



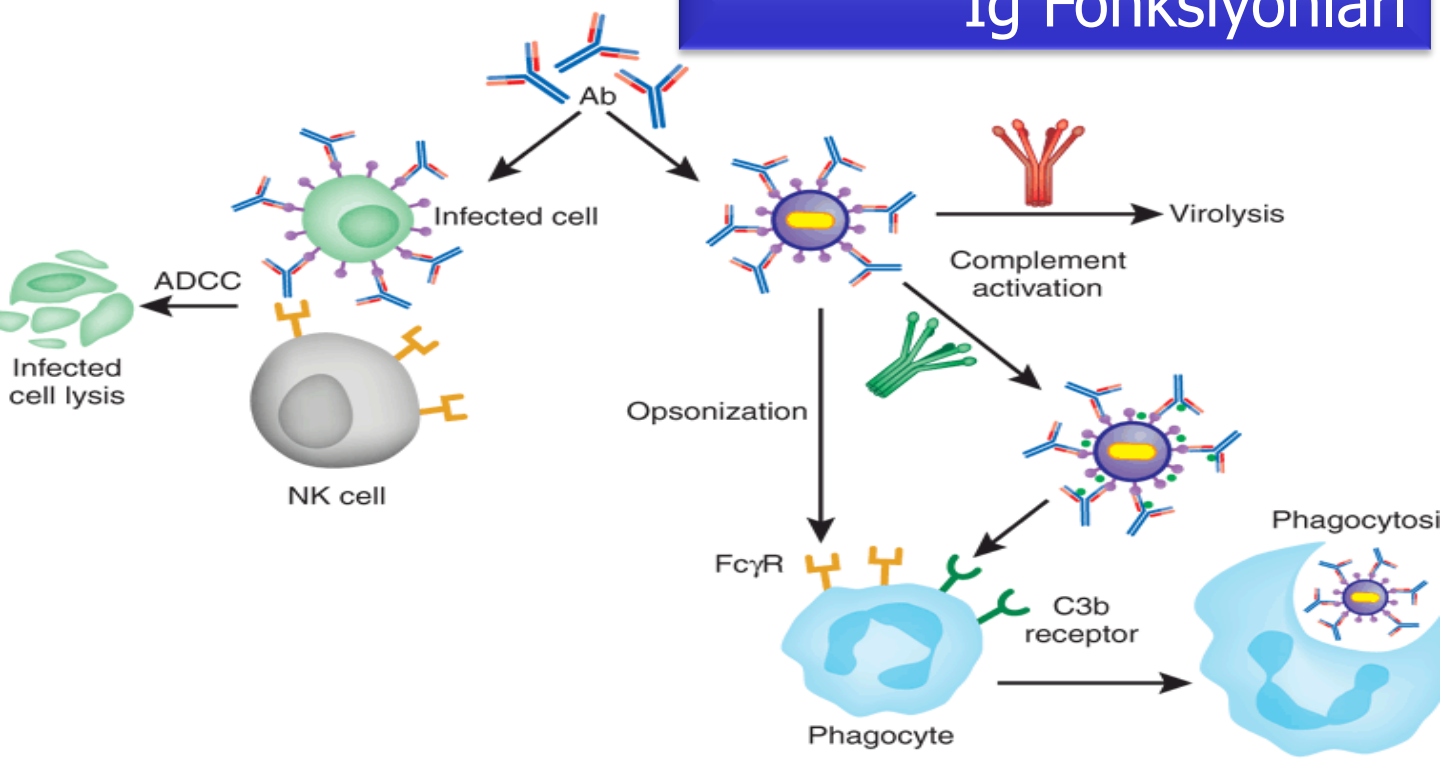


## Ig Fonksiyonel Yapı

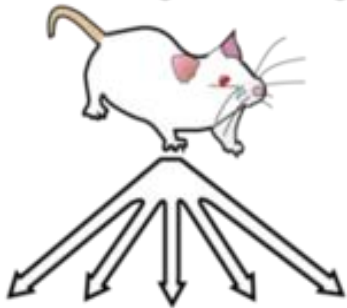




# Ig Fonksiyonları



Mouse challenged with antigen



Spleen Cells



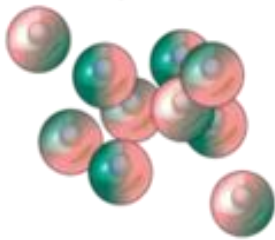
Myeloma Cells

Fusion



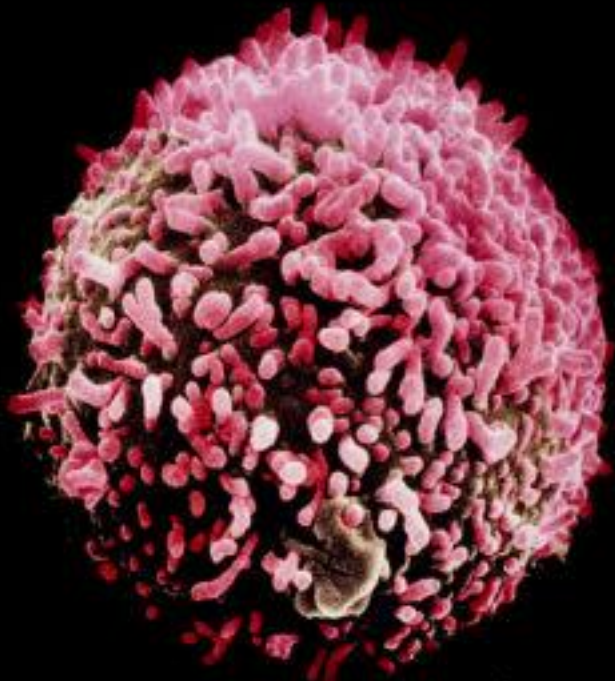
Hybridomas

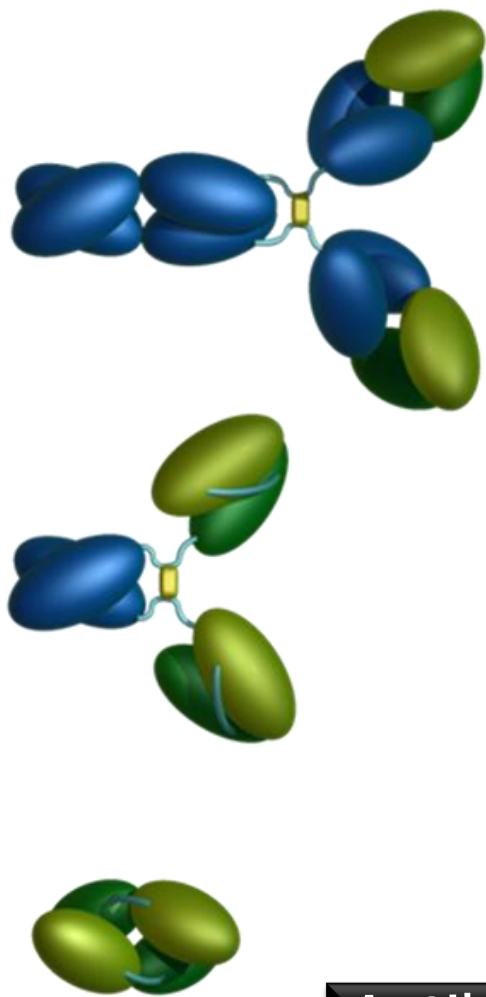
Culture in HAT Medium  
Select for positive cells



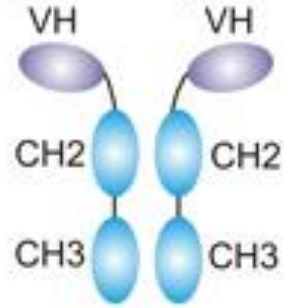
Harvest monoclonal  
antibodies

# Monoklonal Antikör

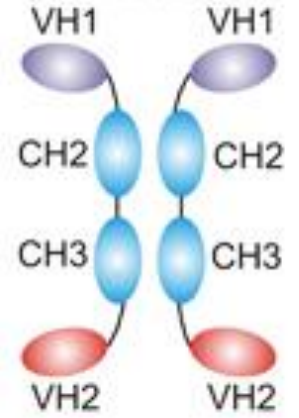




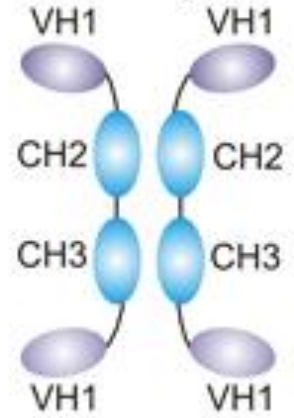
Heavy chain only antibody



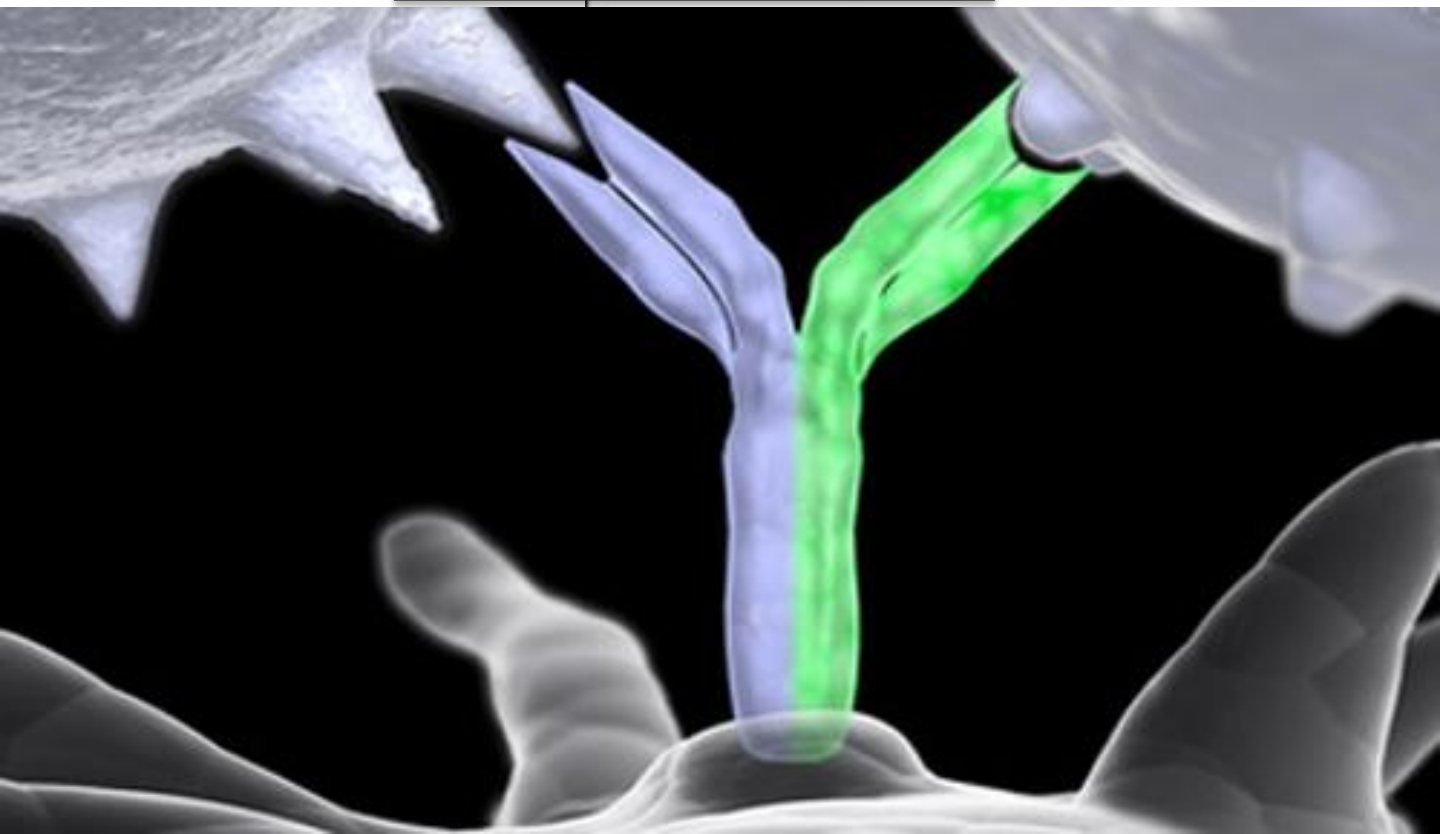
Bi-valent bi-specific antibody



Tetra-valent mono-specific antibody



## Antikor Teknolojileri



# Antikor Teknolojileri

Direct cytotoxicity

Immune modulation

c Immunotoxin

a mAb

b Immunocytokine

c Chemoimmuno-conjugate

Tumour cell

b Bispecific scFv

c Radioimmuno-conjugate

d ADEPT

Prodrug

b Antibody-ligand fusion protein

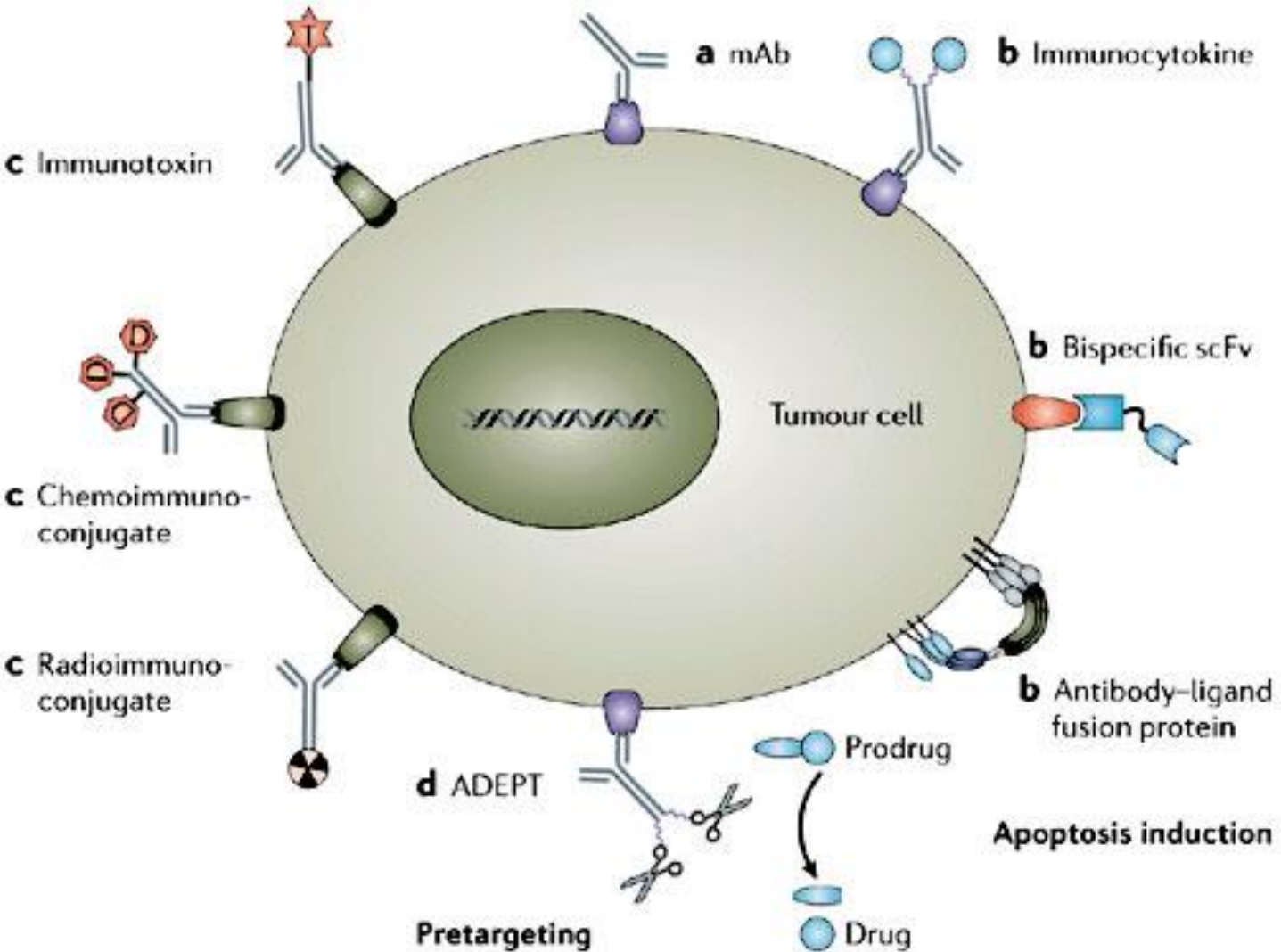
Apoptosis induction

Pretargeting

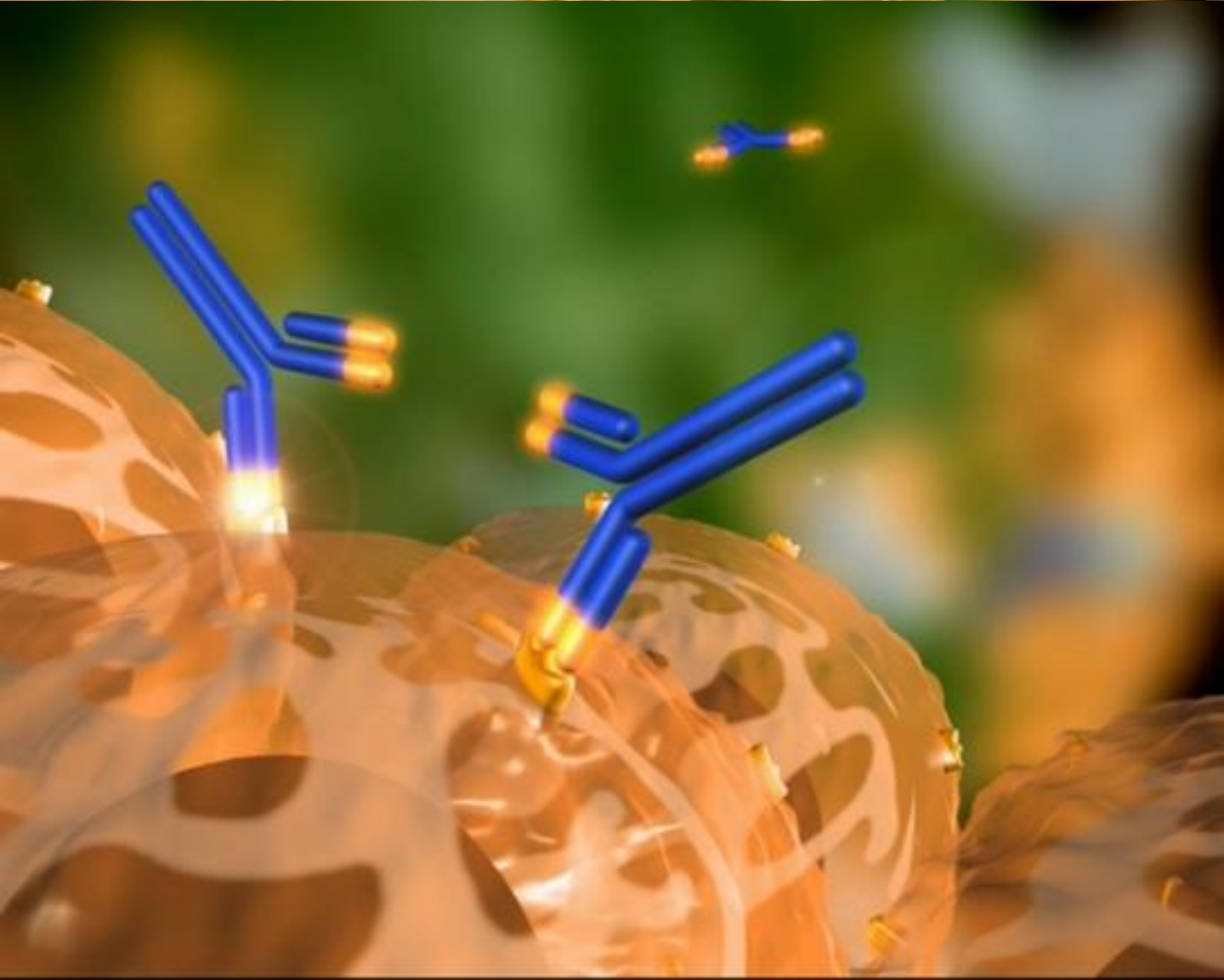
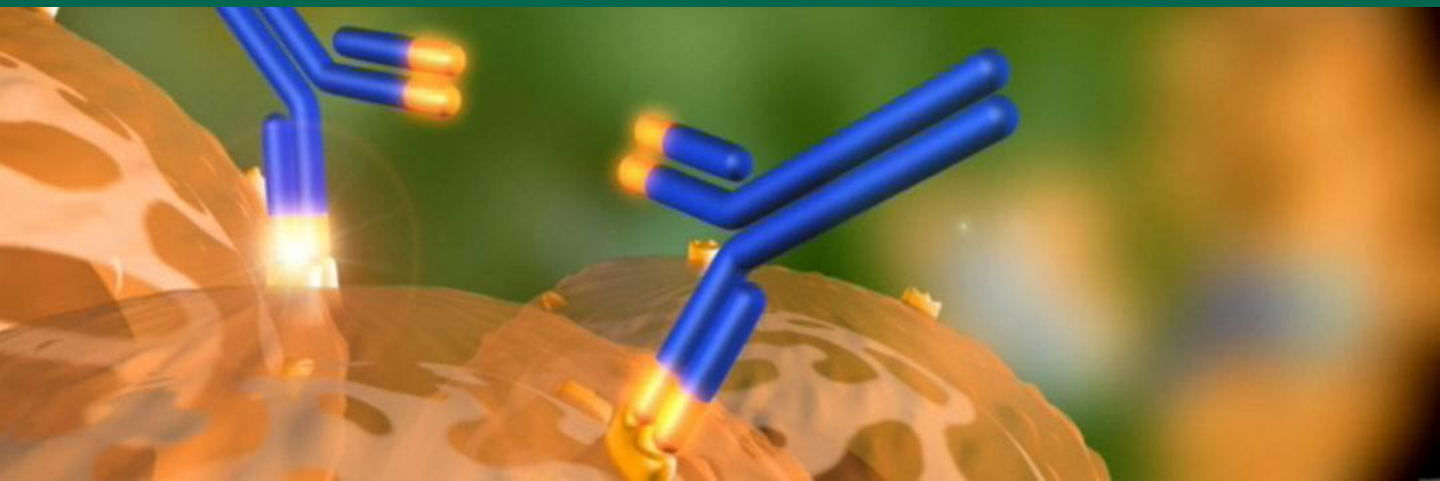
Drug

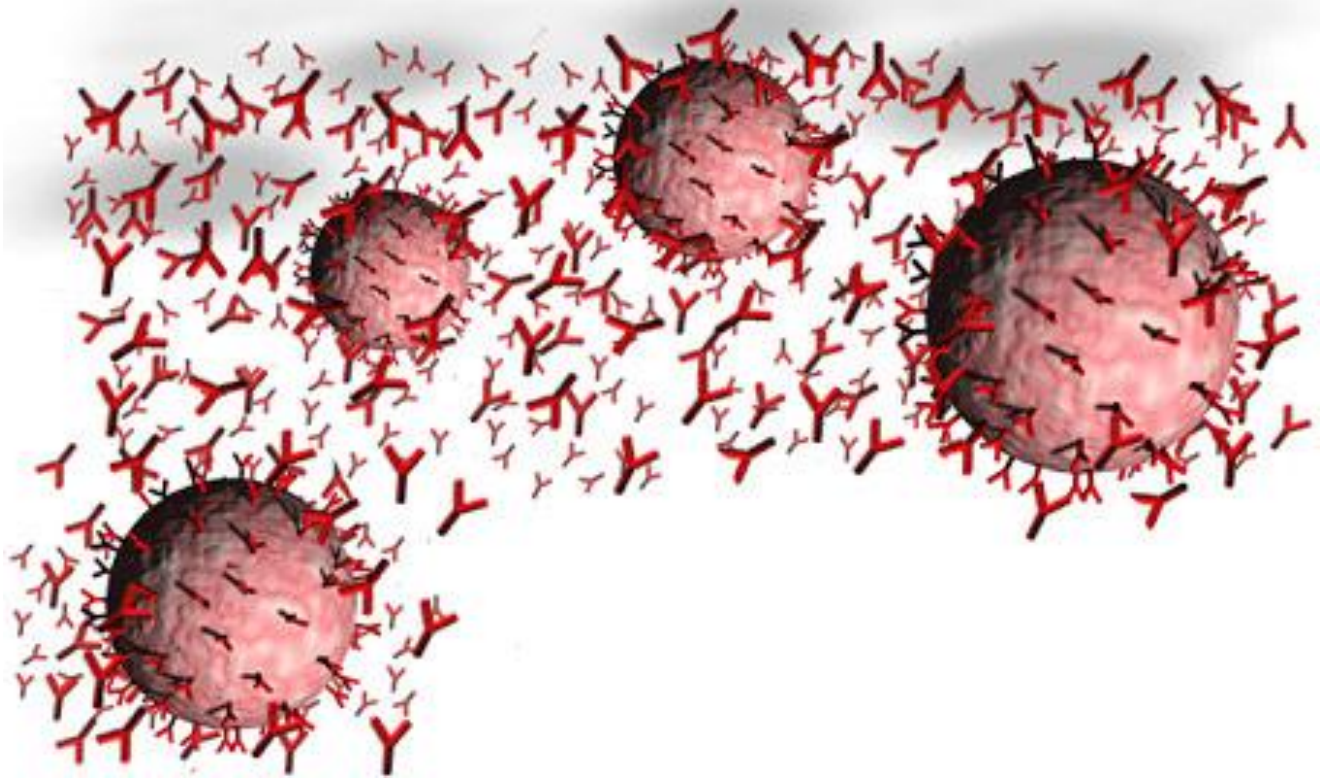
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Nature Reviews | Drug Discovery

## İşaretleme, Hedeflendirme

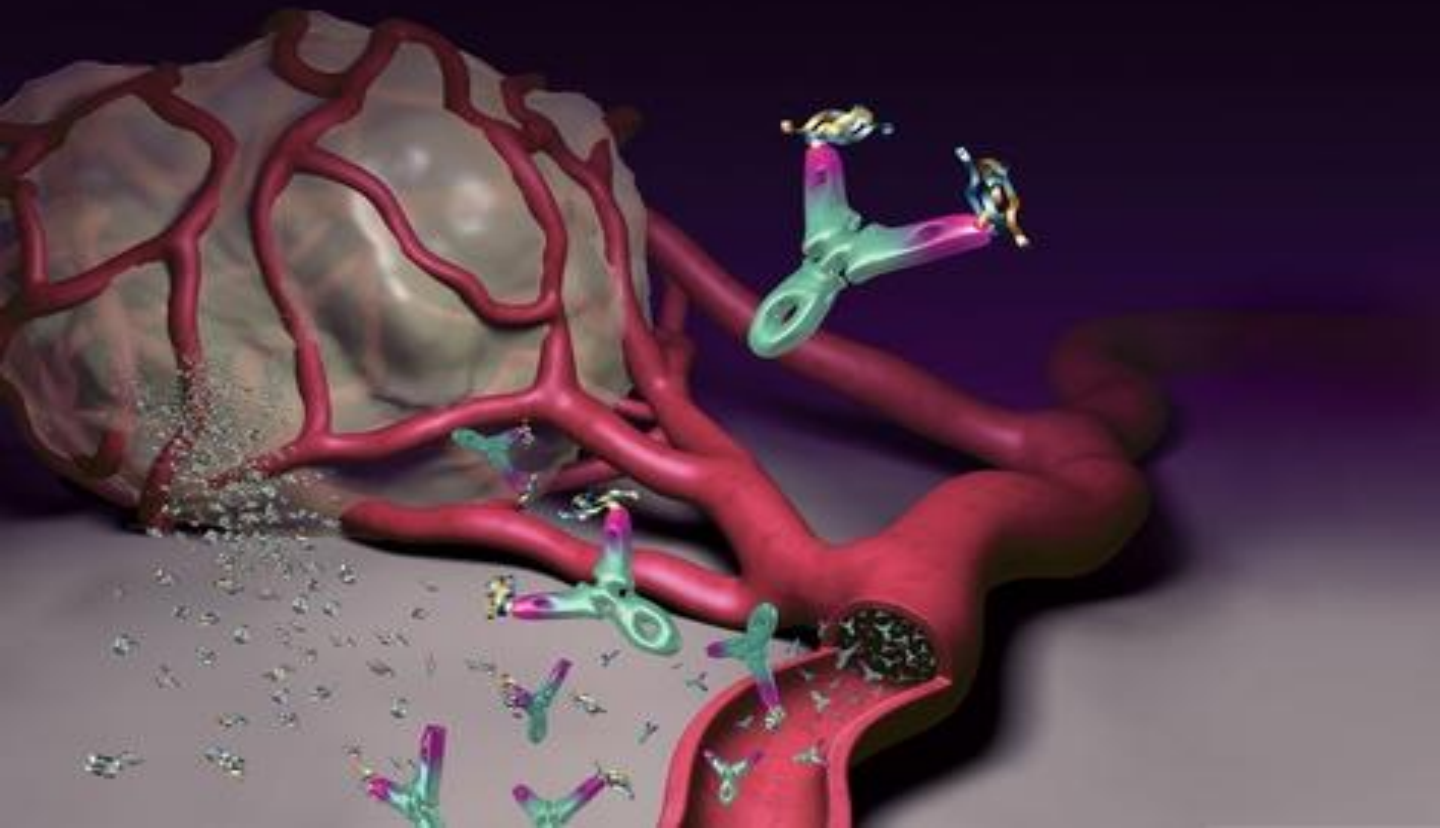
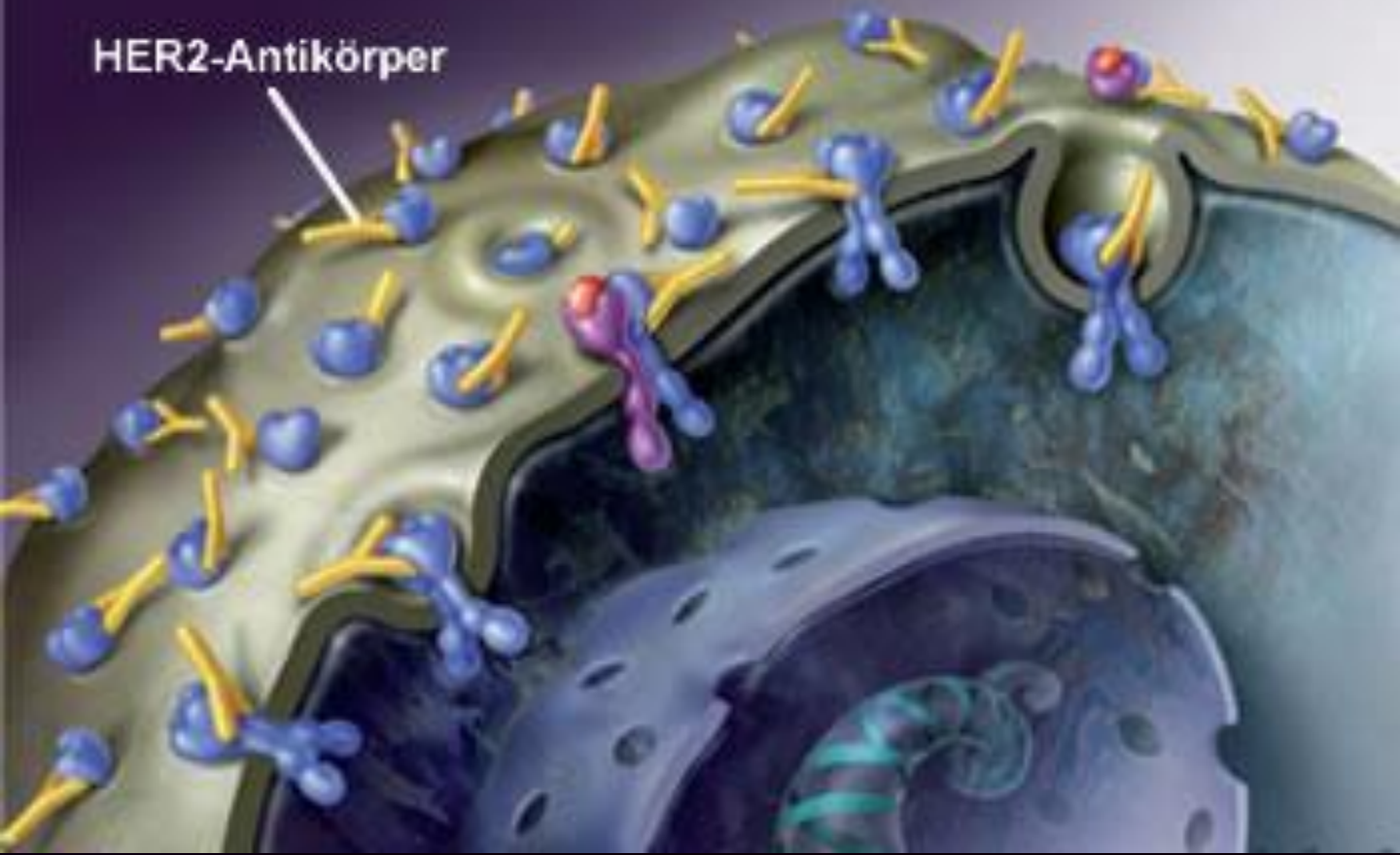


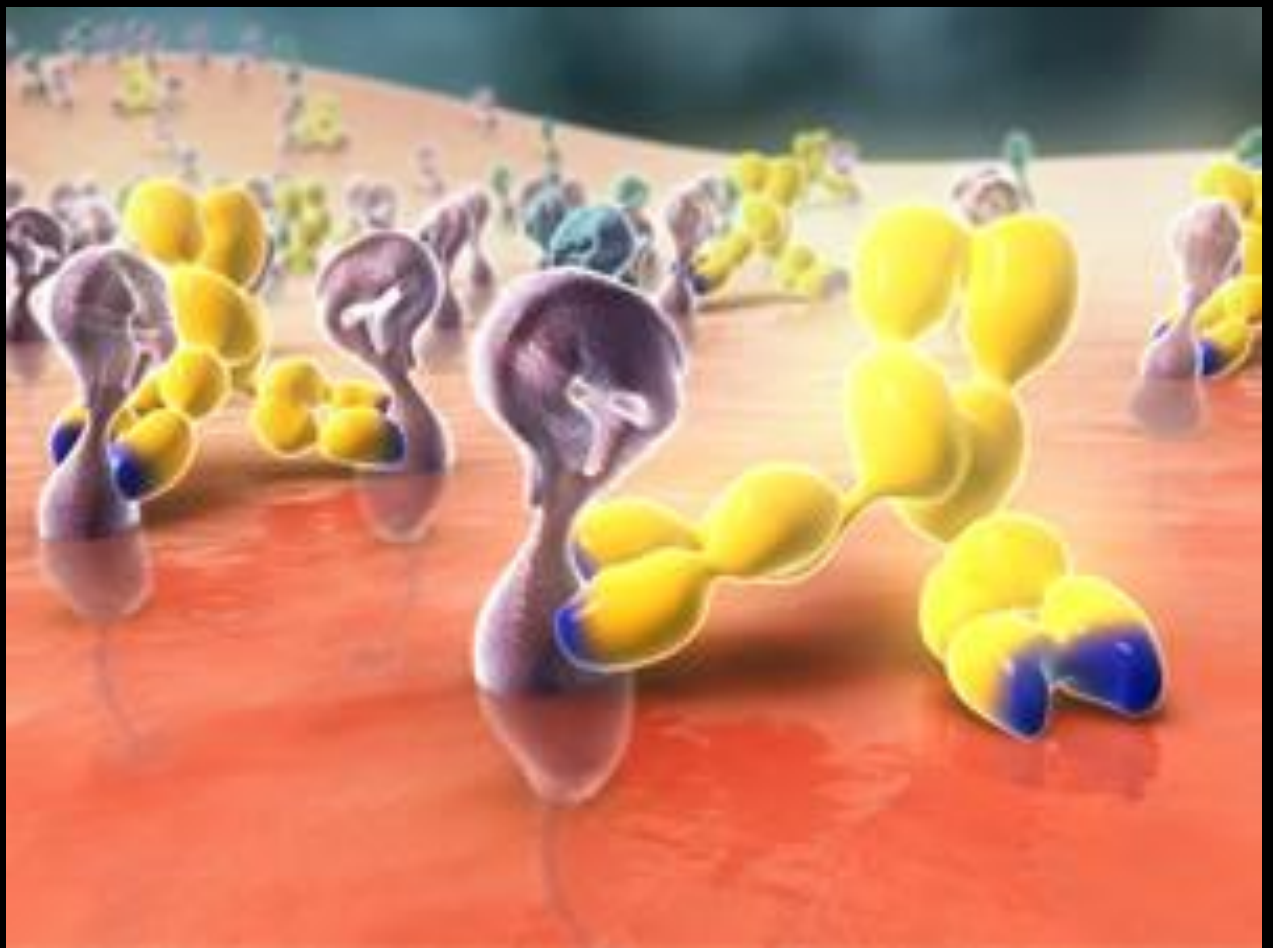
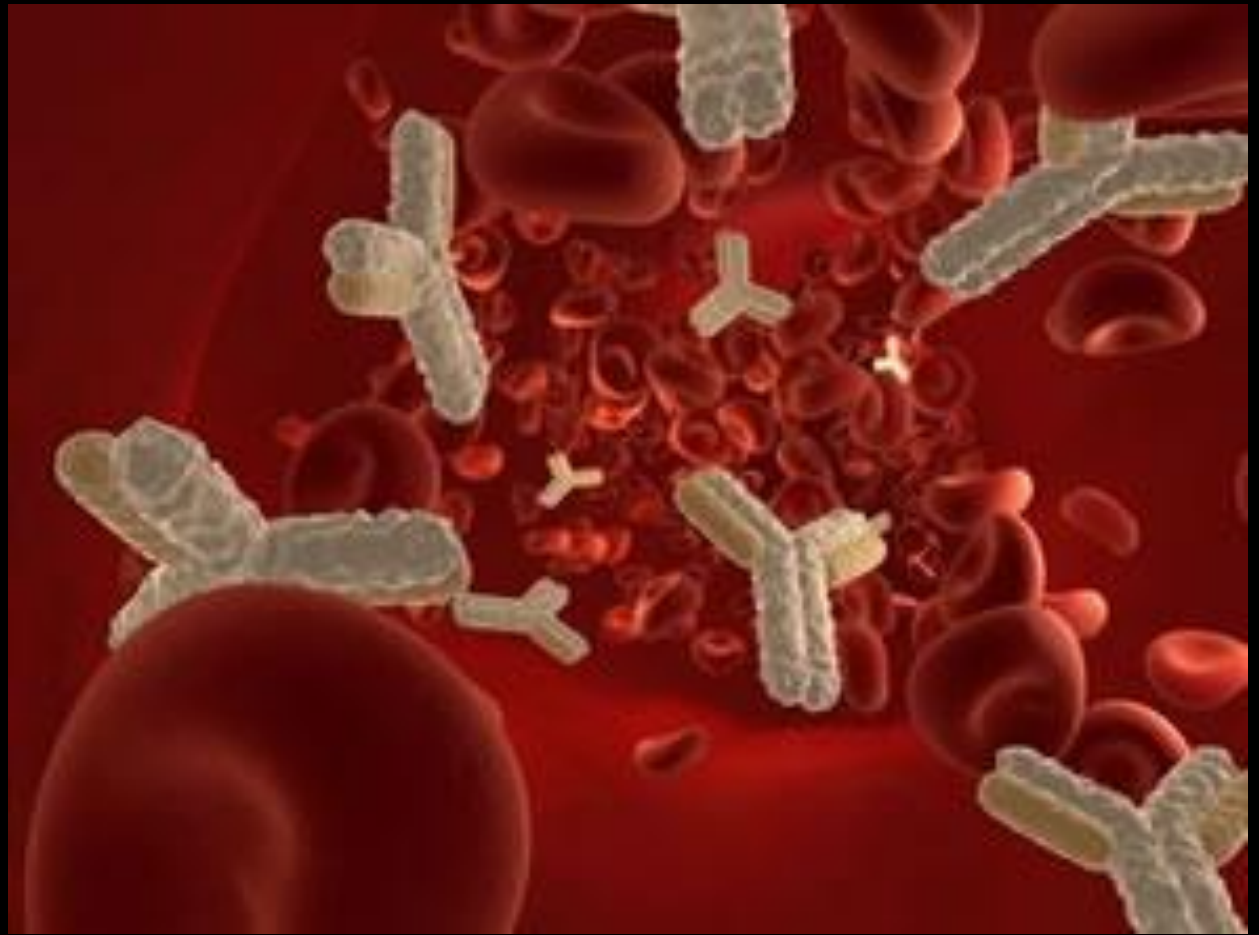


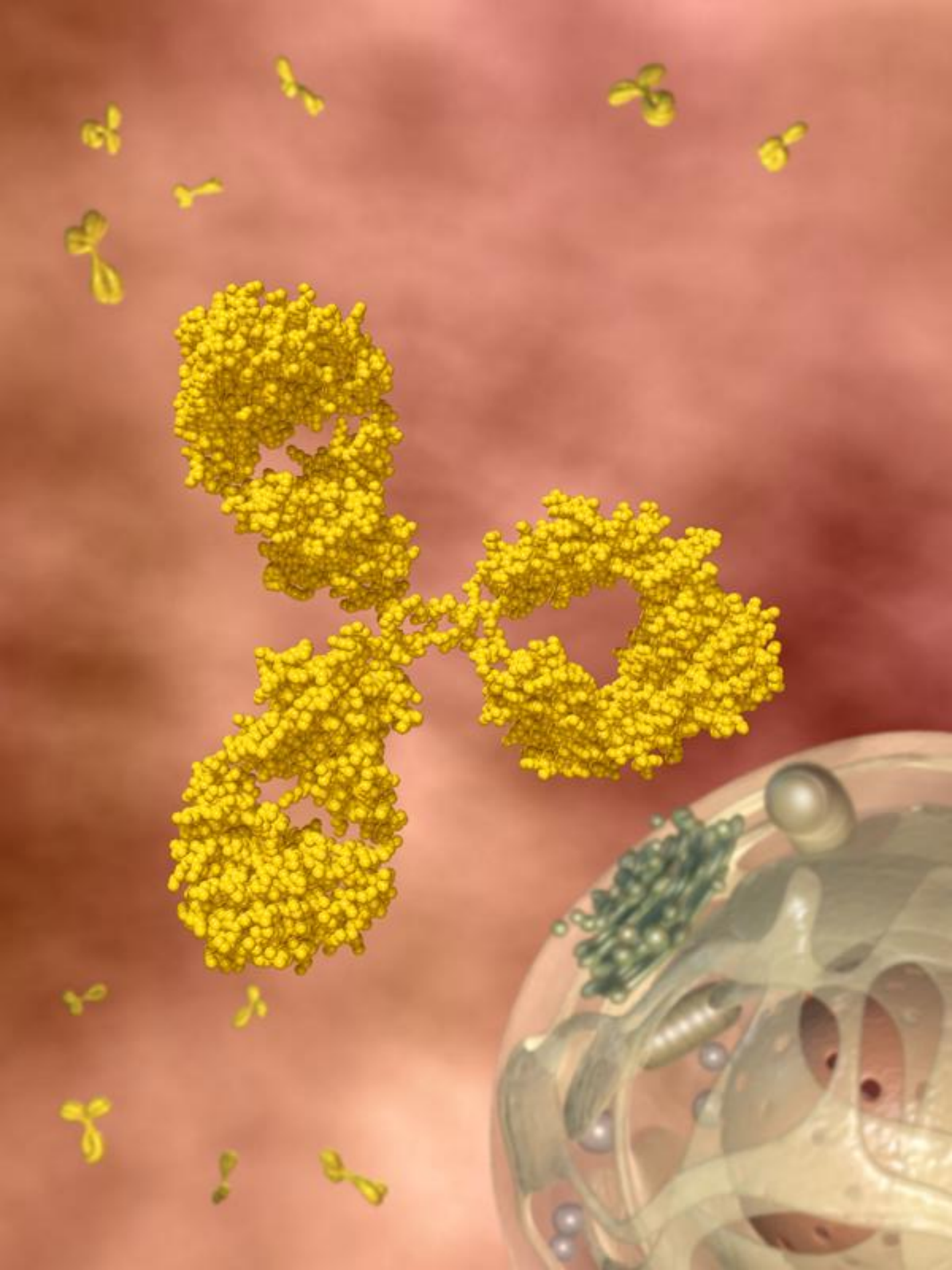


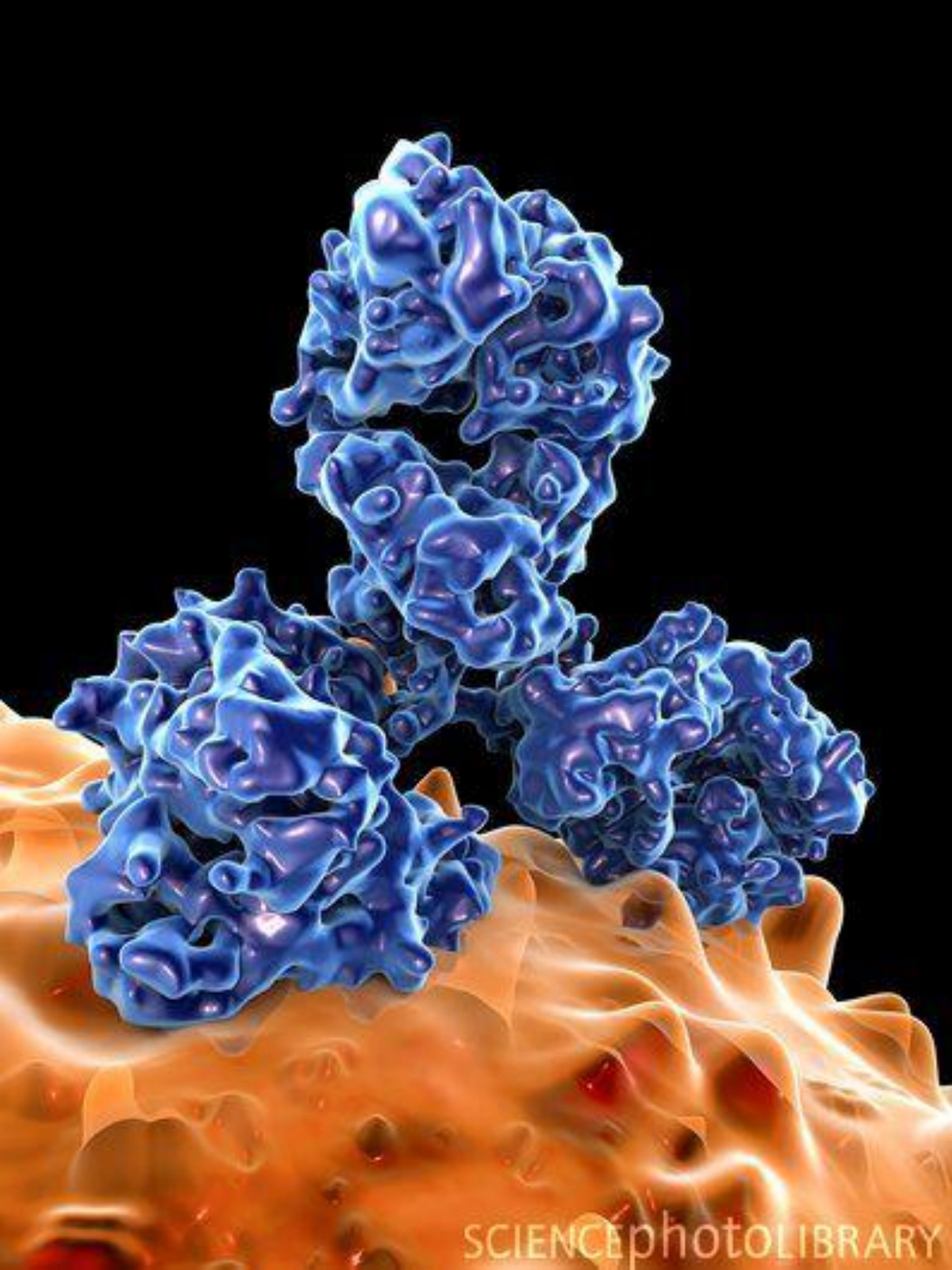


HER2-Antikörper









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