

Persinyalan Permukaan

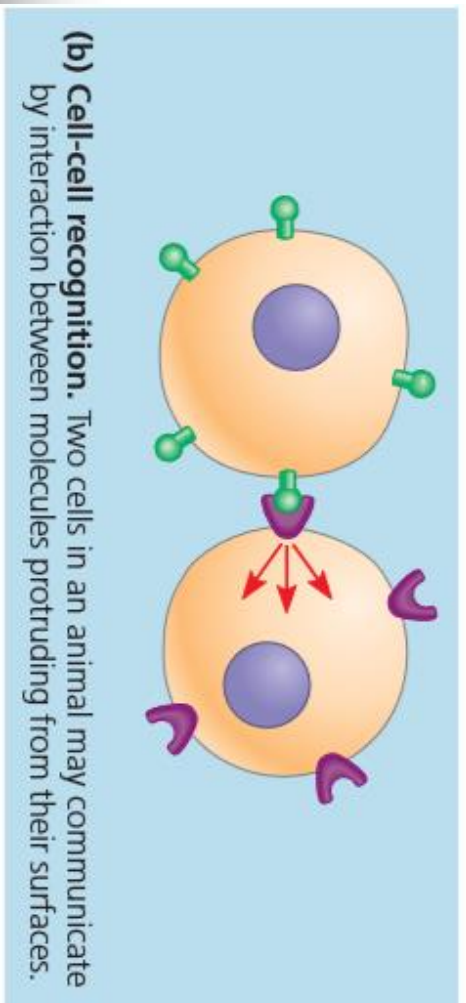
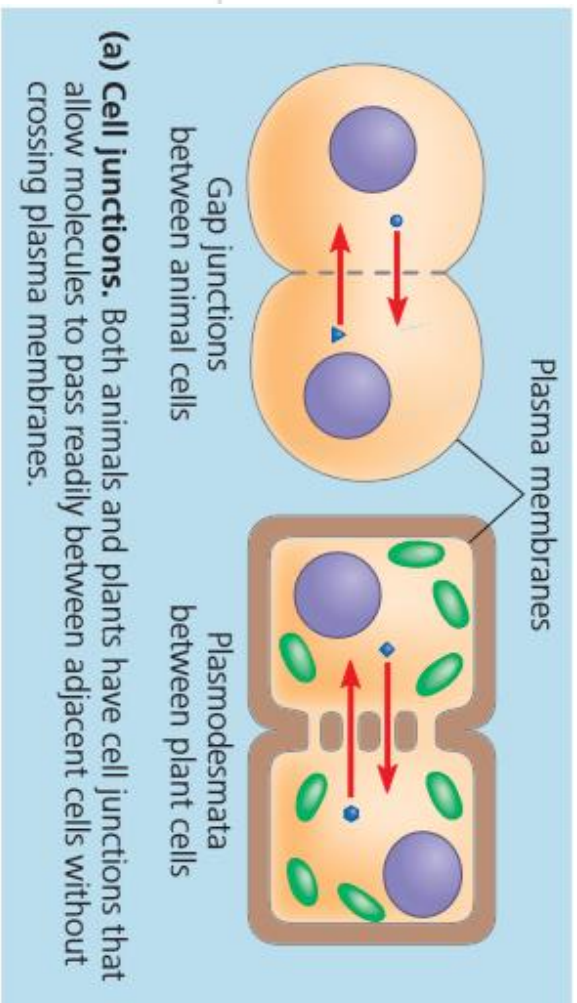
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Komunikasi Sel

Macam Komunikasi Sel

- Terjadi pada 2 sel yang kontak langsung
- Terjadi pada 2 sel yang berdekatan (tidak kontak langsung)
- Terjadi pada 2 sel yang berjauhan

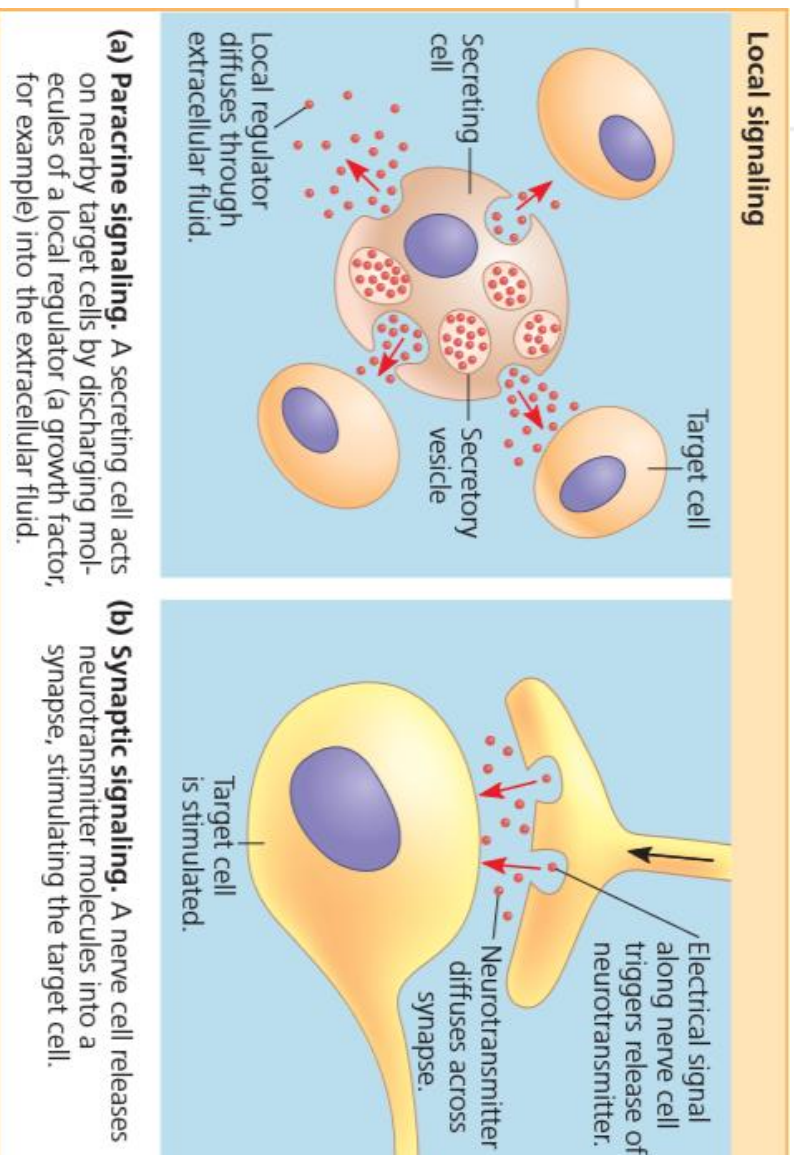
Komunikasi melalui kontak langsung



Komunikasi melalui:

- Cell junction
 - Gap junction
 - Plasmodesmata
- Interaksi molekul-
molekul permukaan

Komunikasi 2 sel yang berdekatan



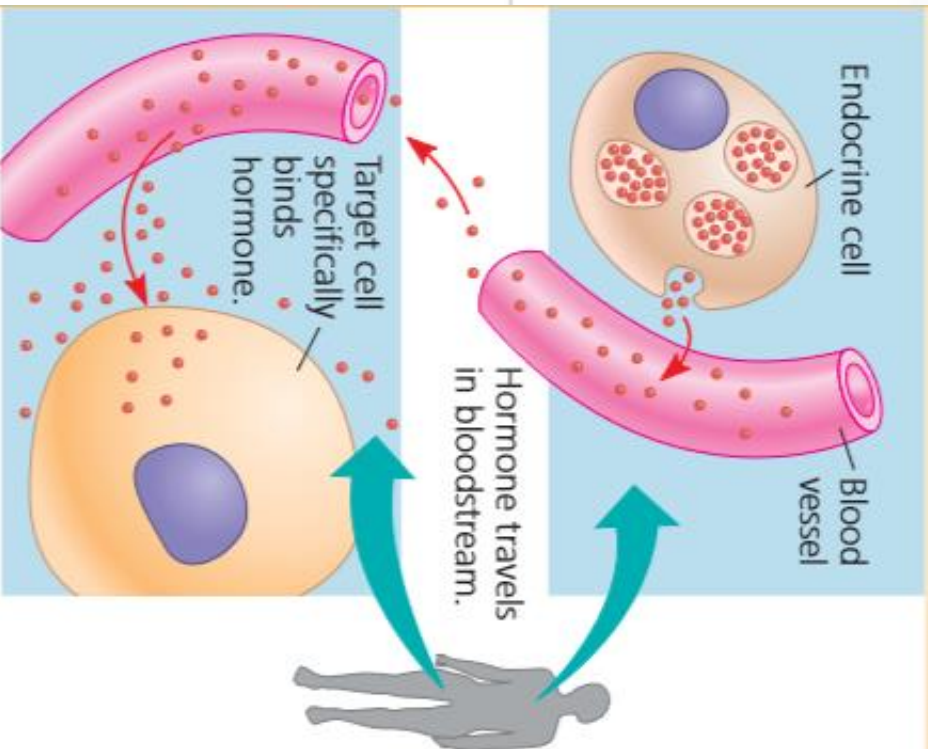
(a) Paracrine signaling. A secreting cell acts on nearby target cells by discharging molecules of a local regulator (a growth factor, for example) into the extracellular fluid.

(b) Synaptic signaling. A nerve cell releases neurotransmitter molecules into a synapse, stimulating the target cell.

Komunikasi jarak dekat dapat melalui:

- Persinyalan parakrin
 - Misal : pada leukosit
- Persinyalan sinaptik kimiawi
 - Sel saraf

Long-distance signaling

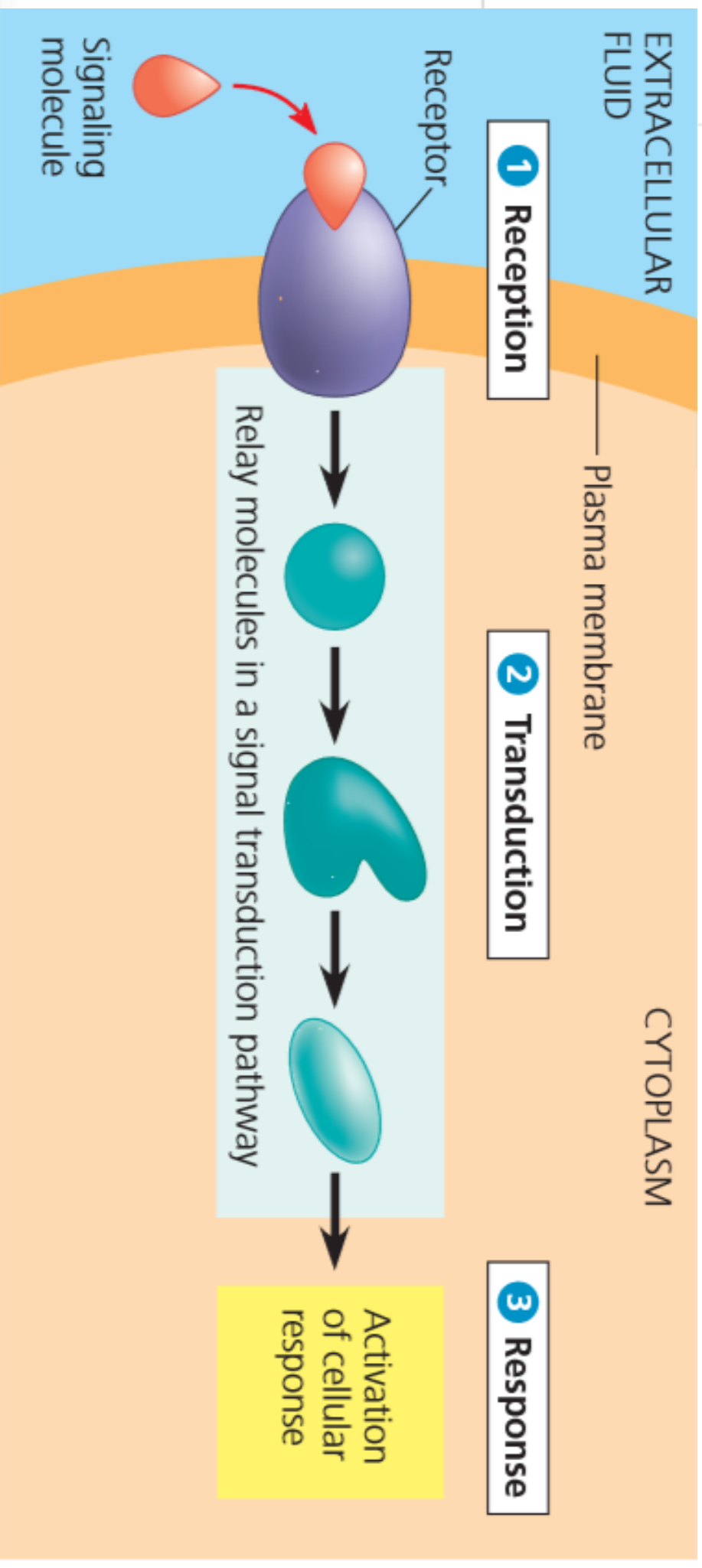


(c) Endocrine (hormonal) signaling. Specialized endocrine cells secrete hormones into body fluids, often blood. Hormones reach virtually all body cells, but are bound only by some cells.

Komunikasi 2 sel yang berjauhan

Hormon dihasilkan oleh sel endokrin dan dilepaskan ke dalam darah untuk kemudian menuju ke sel target yang lokasinya jauh dari lokasi dihasilkan hormon

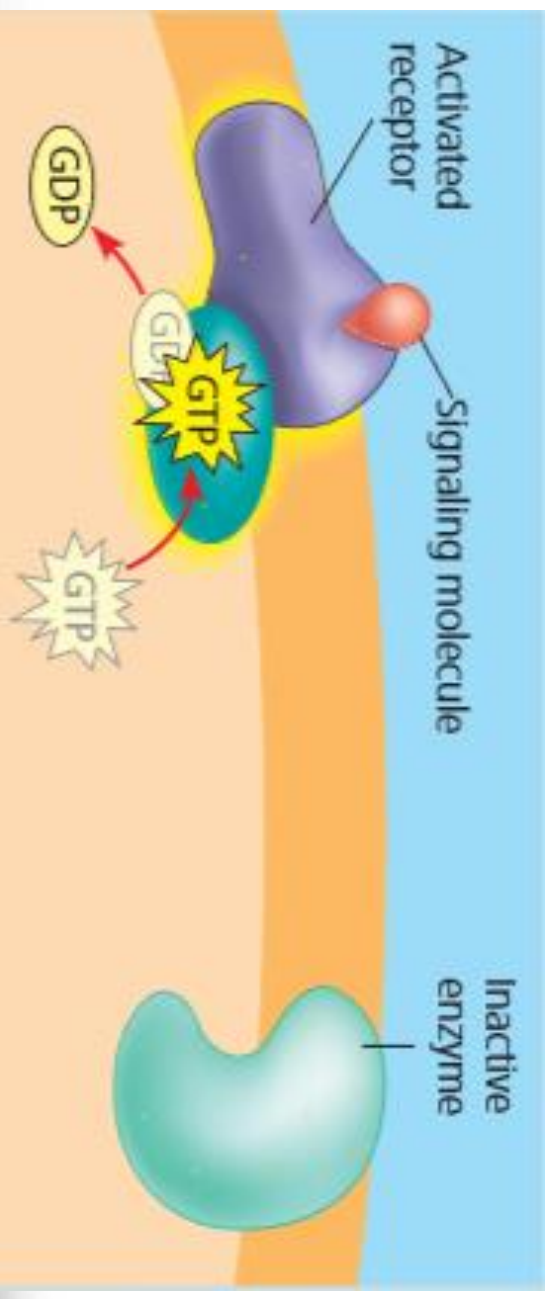
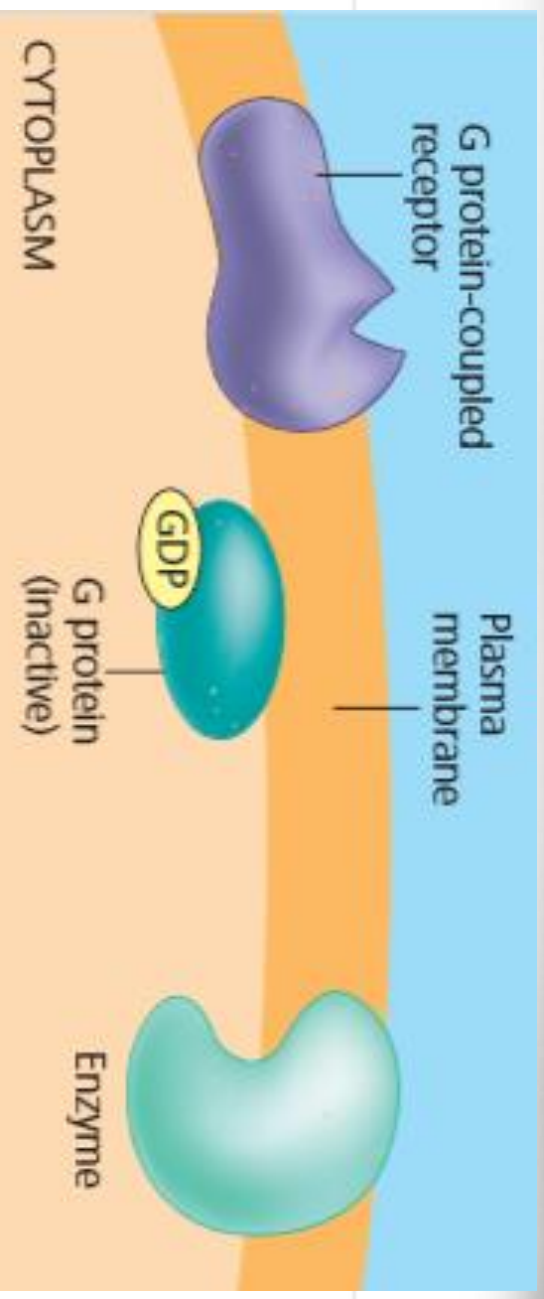
Persinyalan Sel



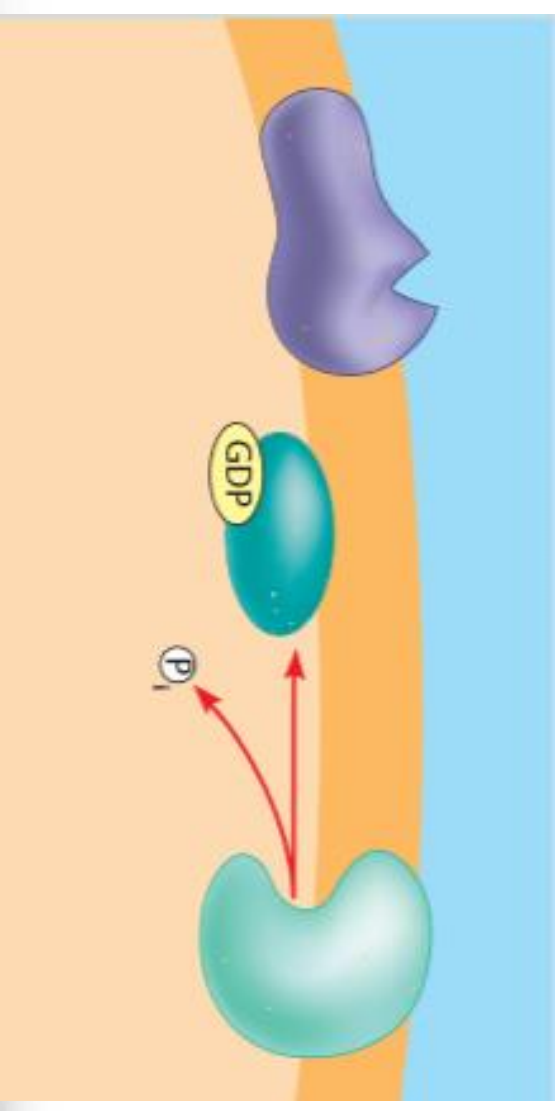
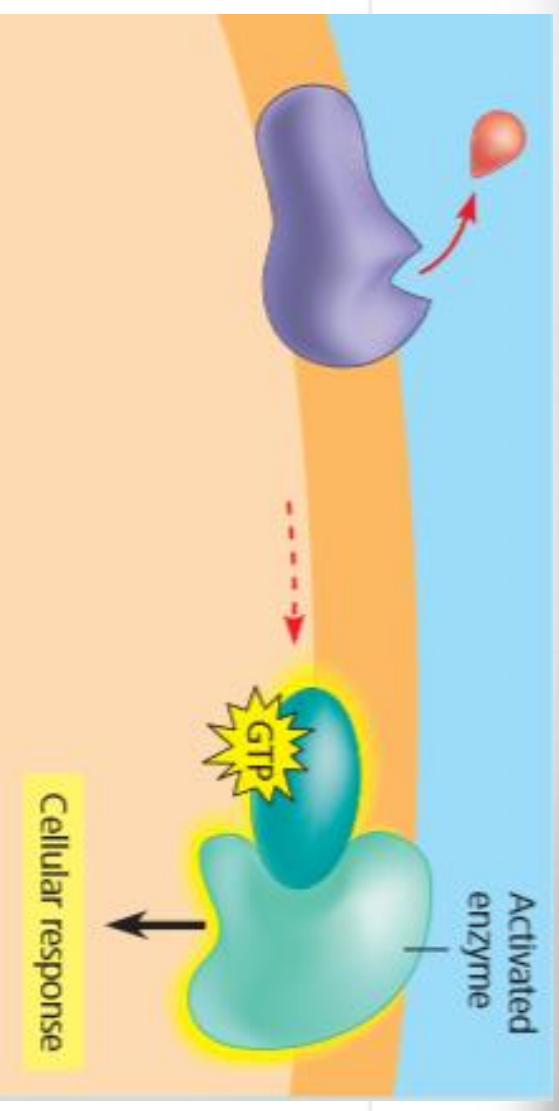
Macam Protein Reseptor Sinyal

- Reseptor pada membrane plasma → molekul sinyal tidak dapat menembus membran
 - Reseptor terkait protein G
 - Reseptor tirosin-kinase
 - Reseptor saluran ion
- Reseptor intraseluler → molekul sinyal menembus membran

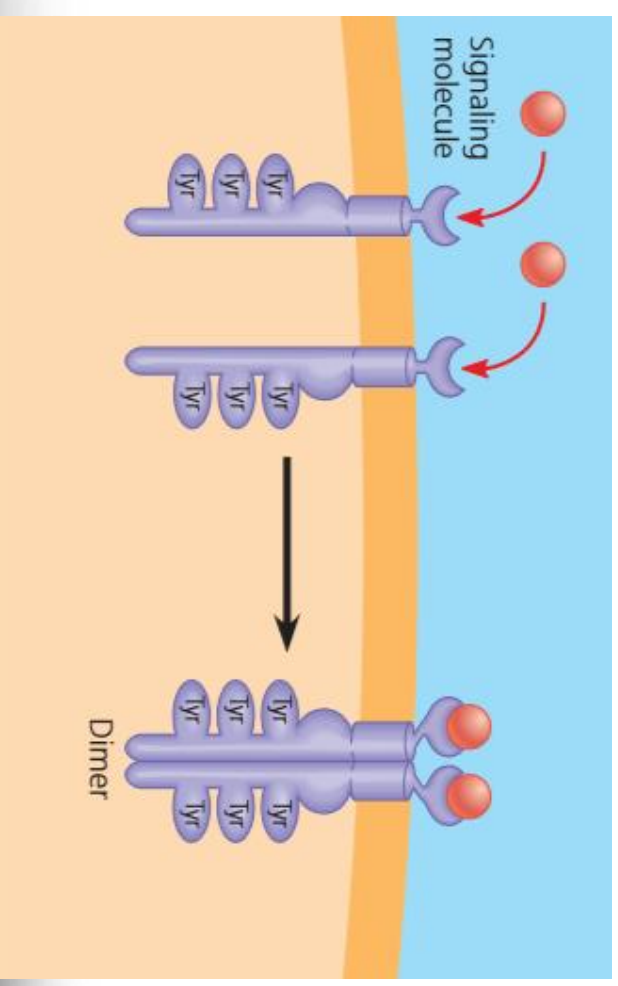
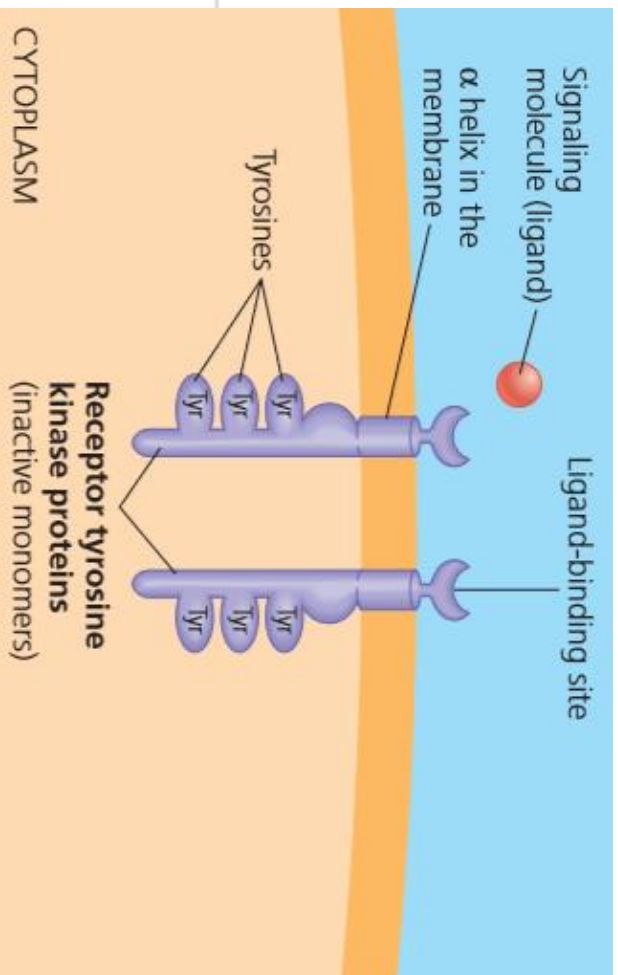
Cara Kerja Reseptor Terkait Protein G



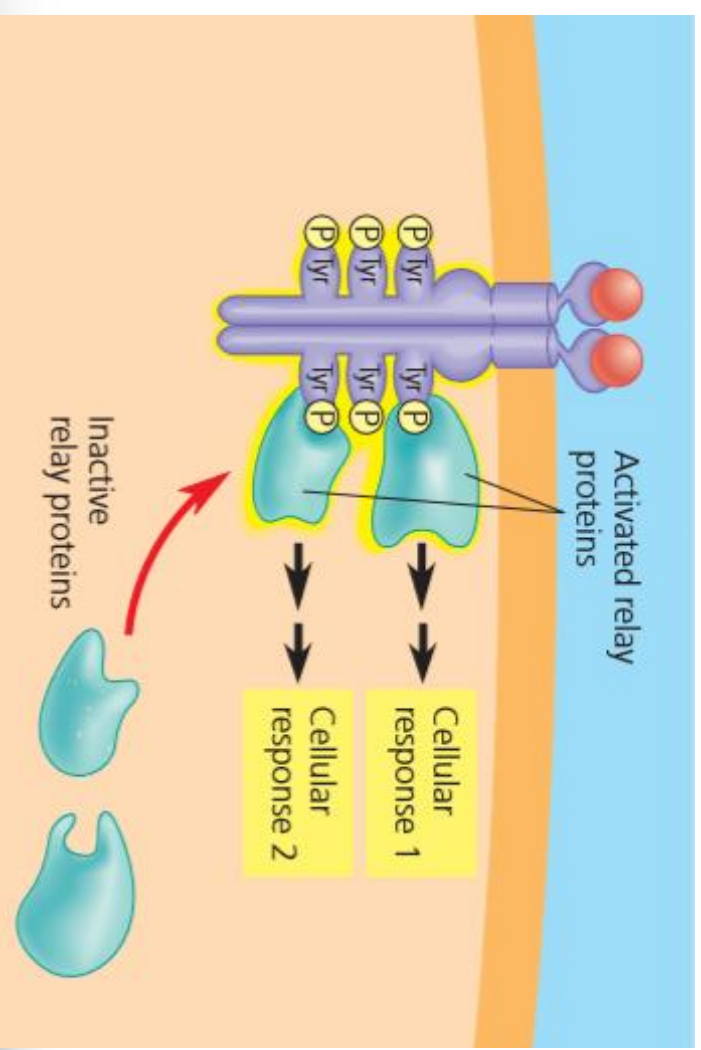
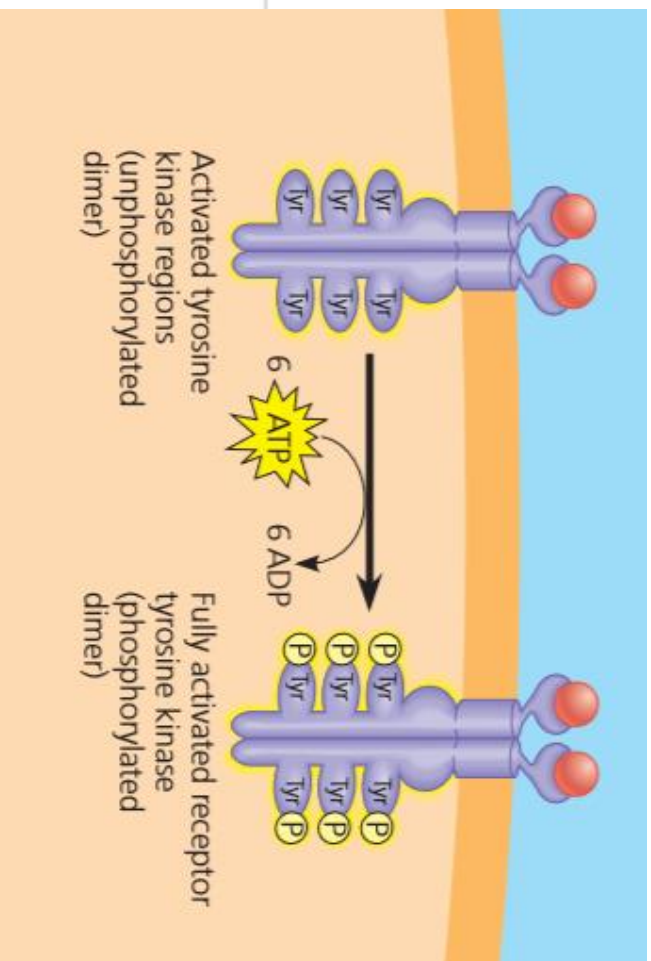
Cara Kerja Reseptor Terkait Protein G



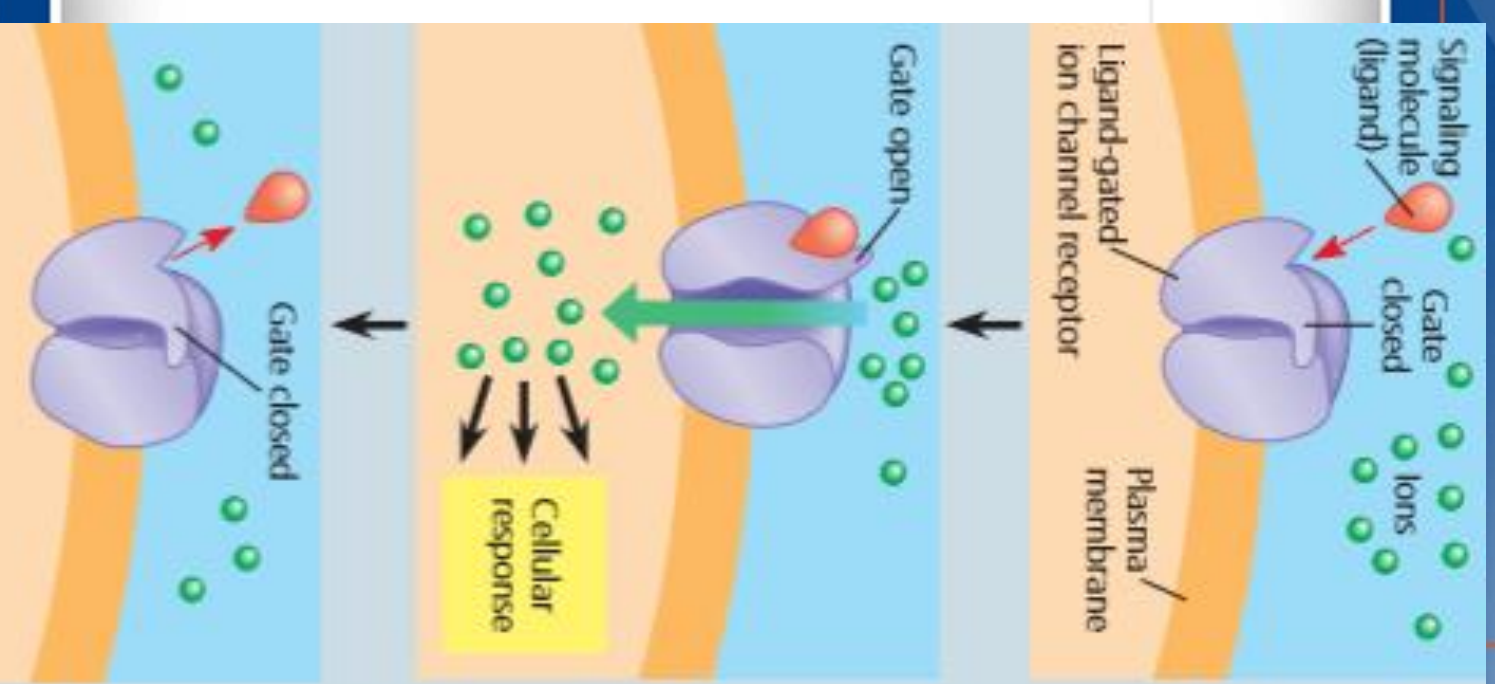
Cara Kerja Reseptor Tirosin Kinase



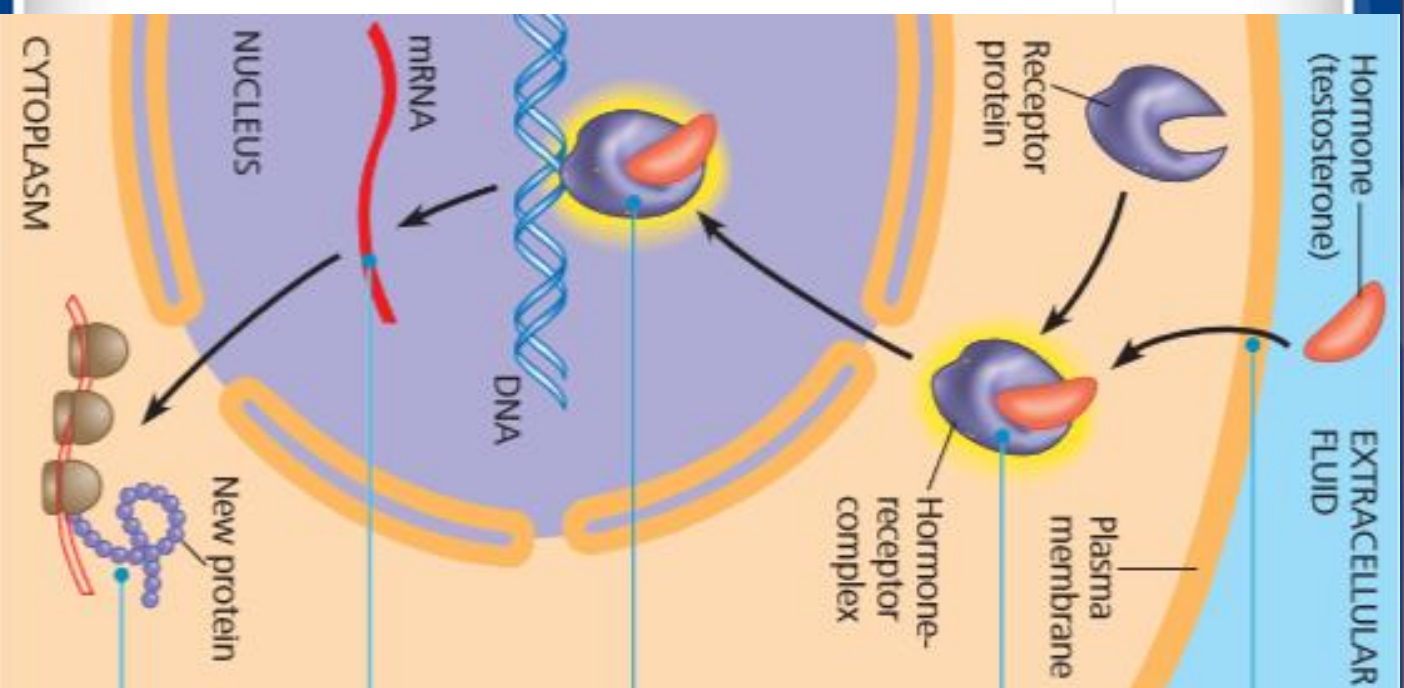
Cara Kerja Reseptor Tirosin Kinase



Cara Kerja Reseptor Saluran Ion



Cara Kerja Reseptor Intraseluler



1 The steroid hormone testosterone passes through the plasma membrane.

2 Testosterone binds to a receptor protein in the cytoplasm, activating it.

3 The hormone-receptor complex enters the nucleus and binds to specific genes.

4 The bound protein acts as a transcription factor, stimulating the transcription of the gene into mRNA.

5 The mRNA is translated into a specific protein.