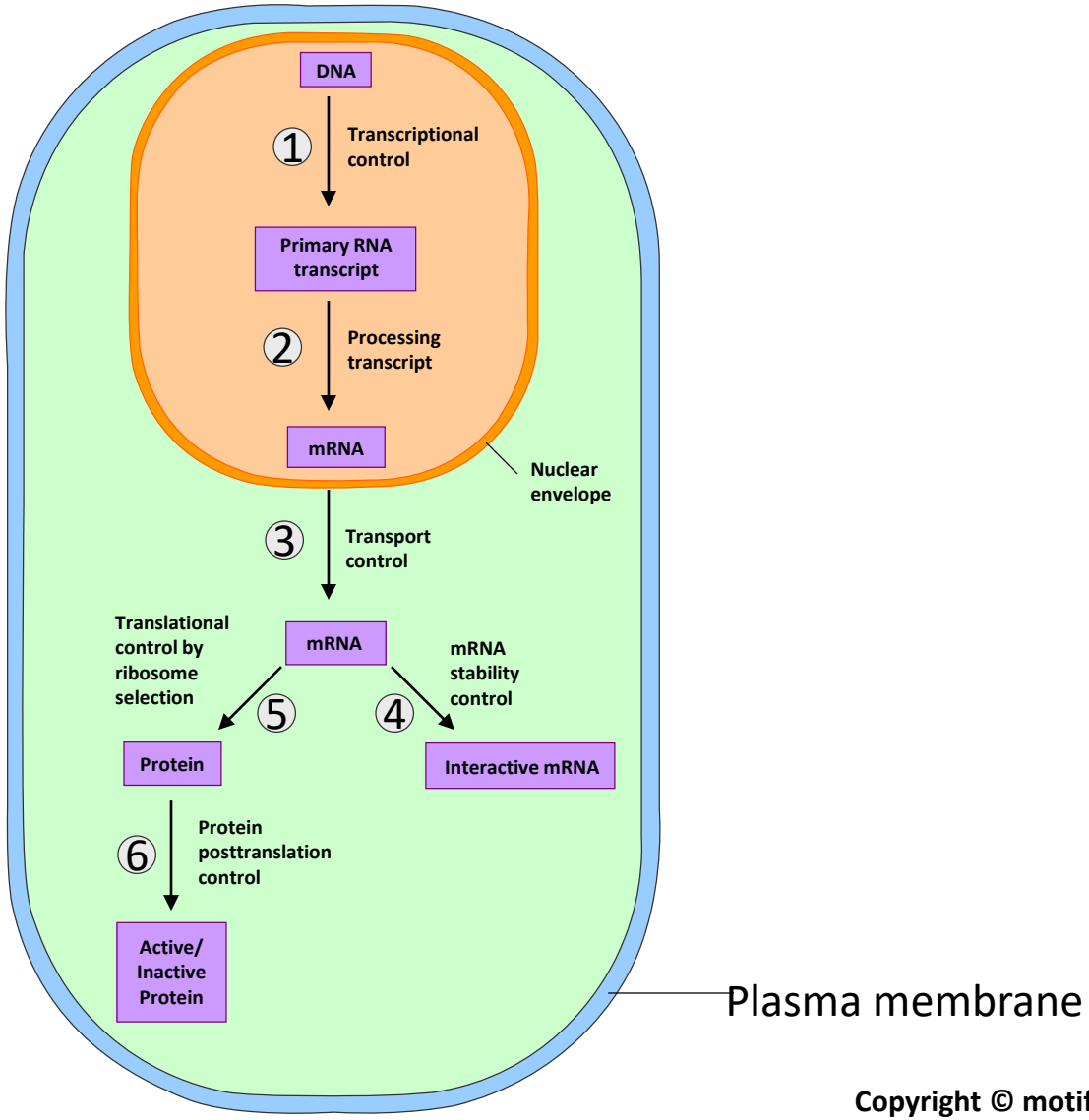
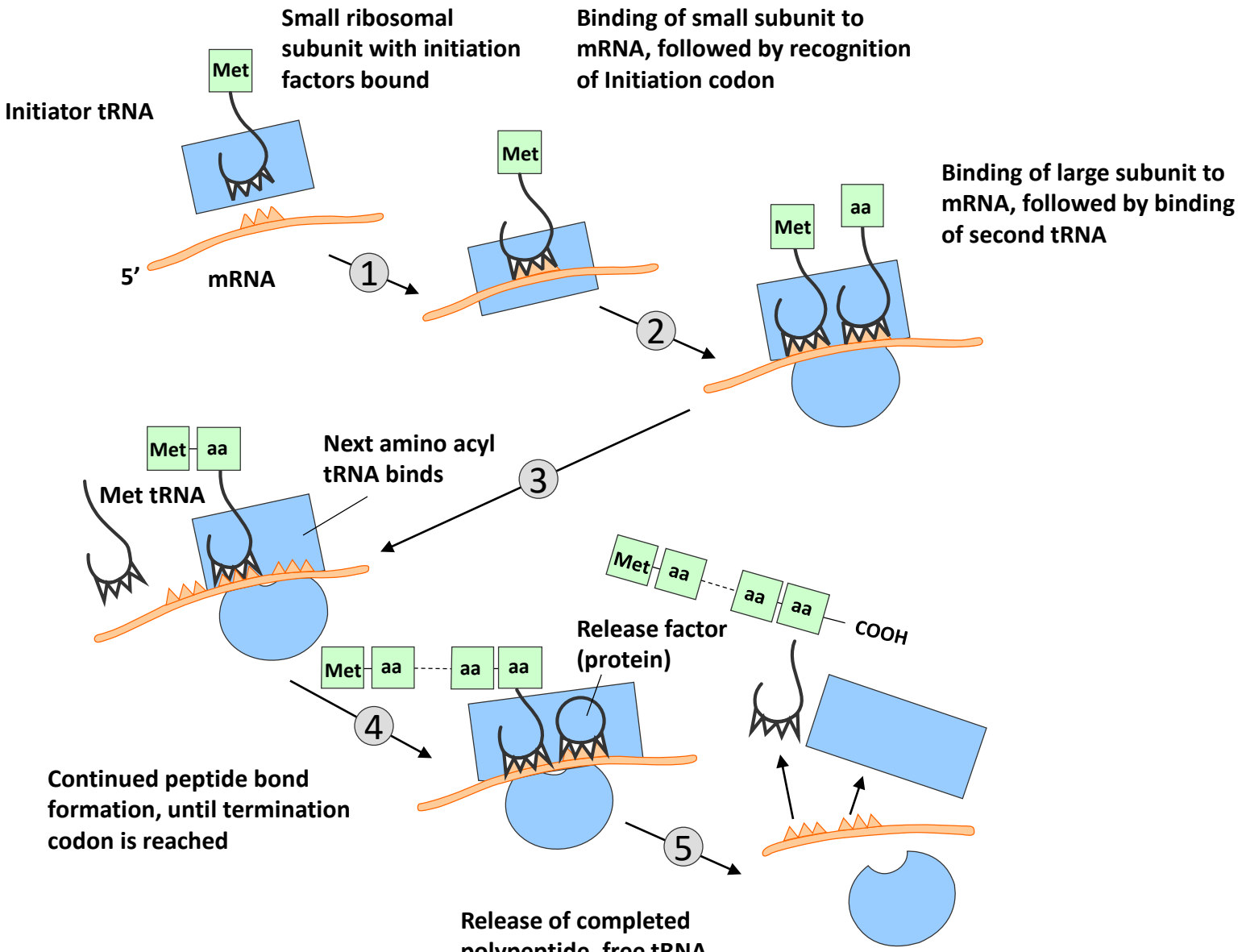
Six steps of information transfer in eukaryotes that constitute potential regulatory points of gene expression

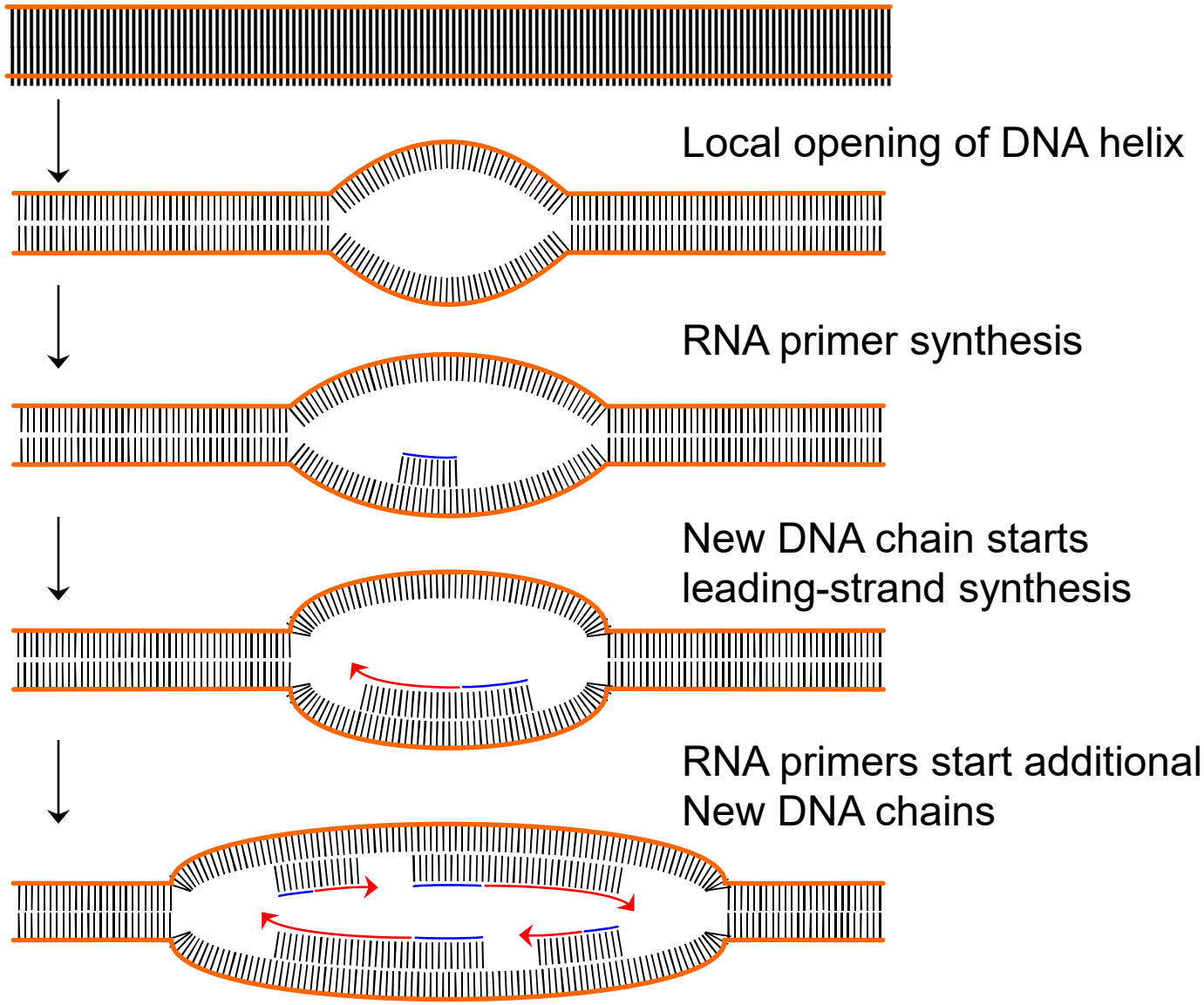


Scheme of events for protein translation from a mRNA molecule



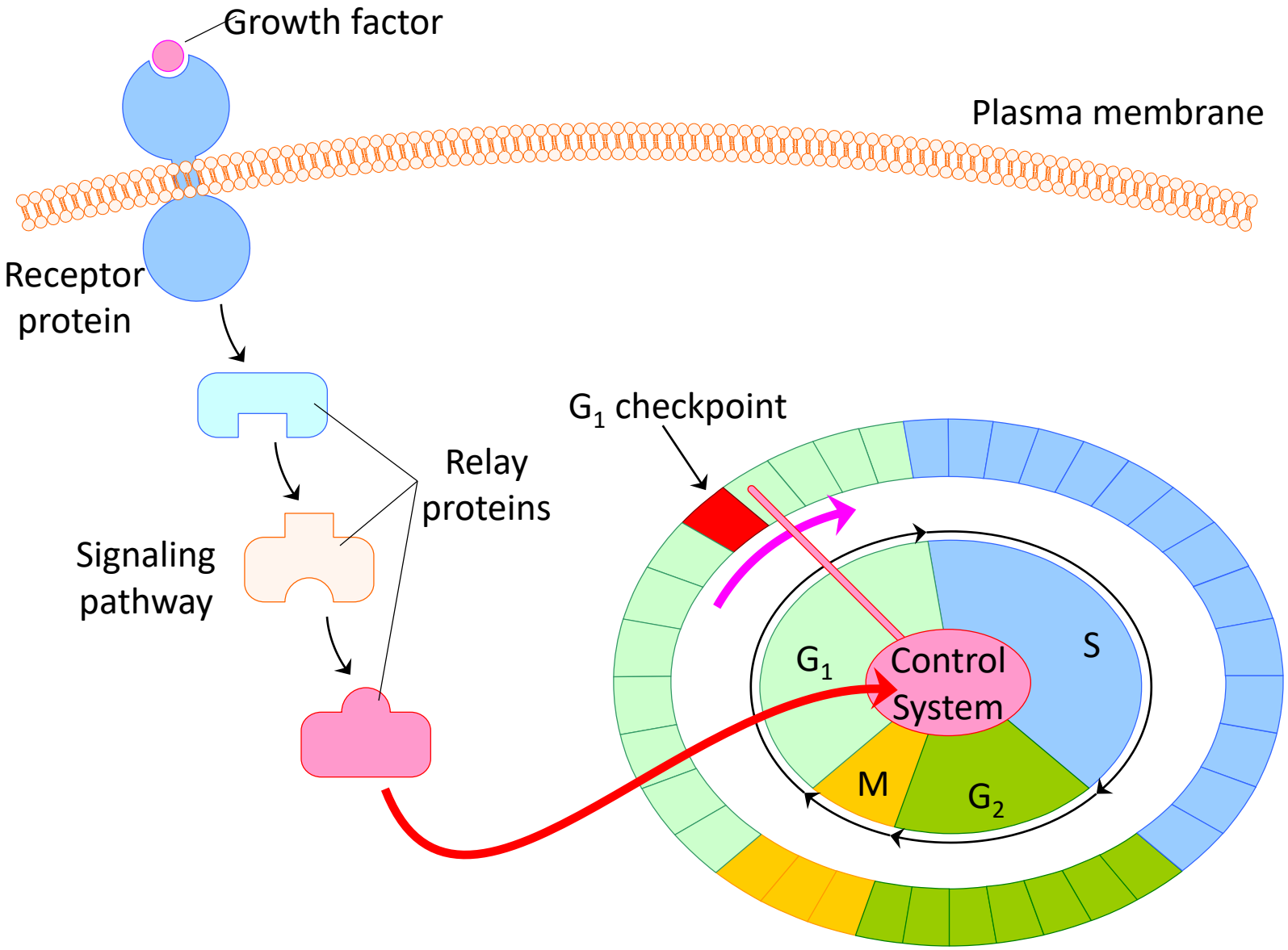
5111315

Replication bubble



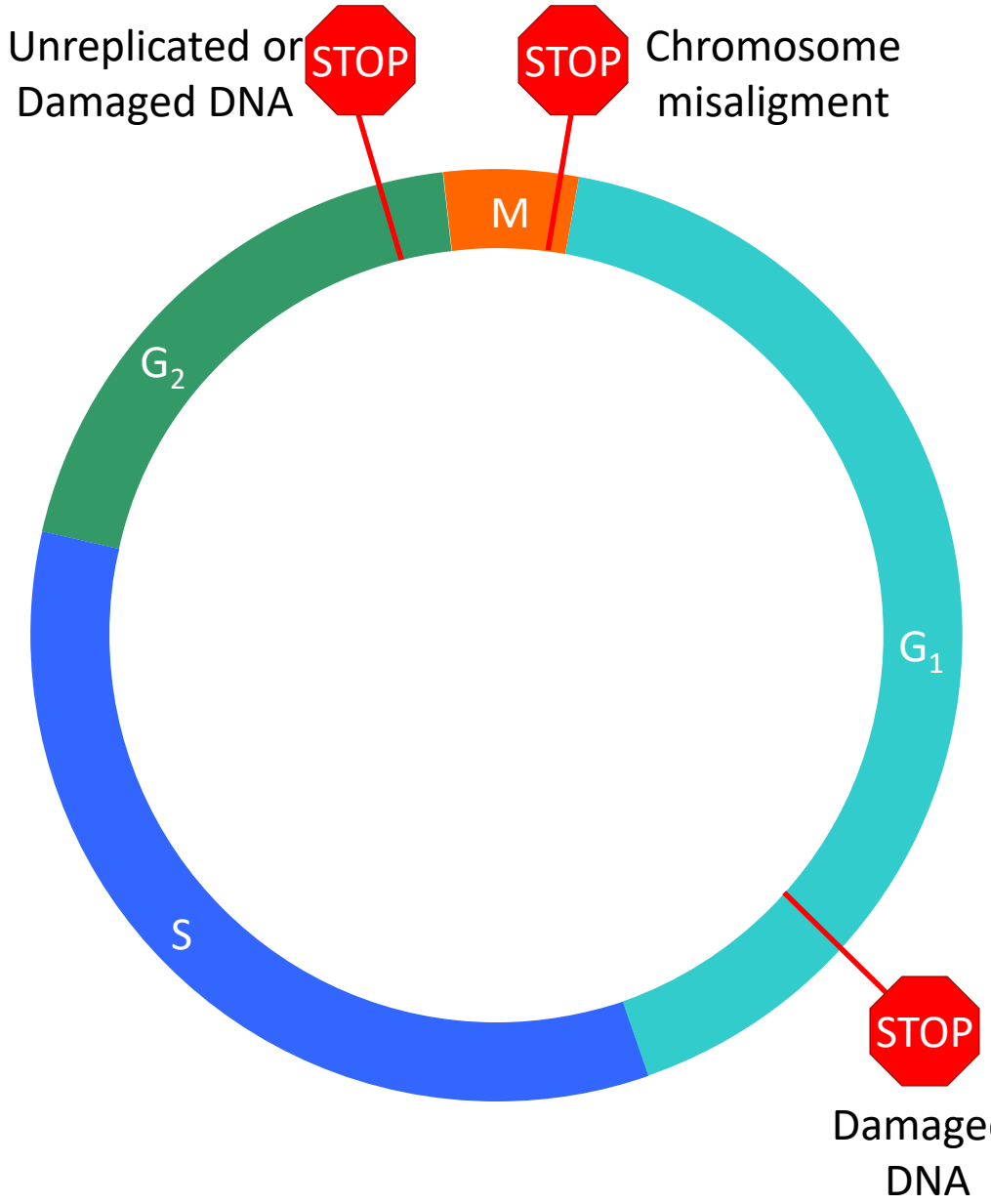
5111196

How a growth factor signals the cell cycle control system



5111186

Cell cycle checkpoints



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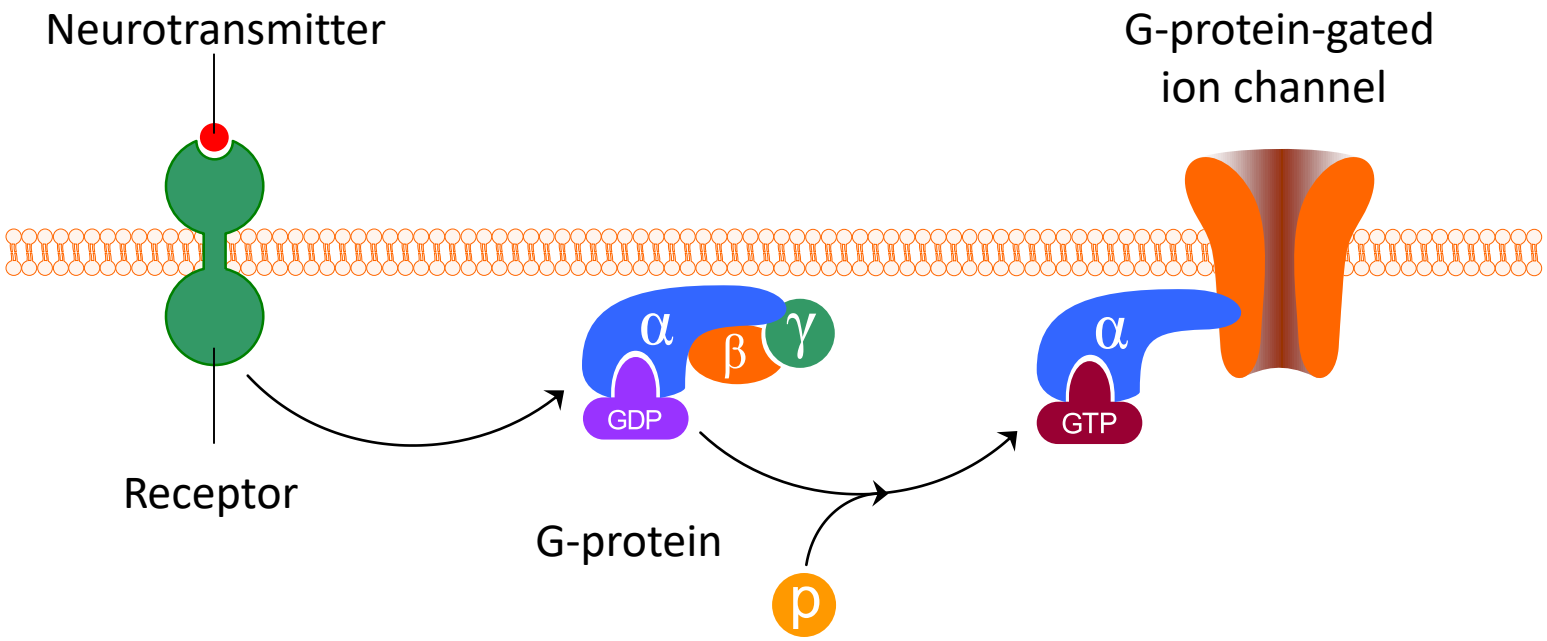
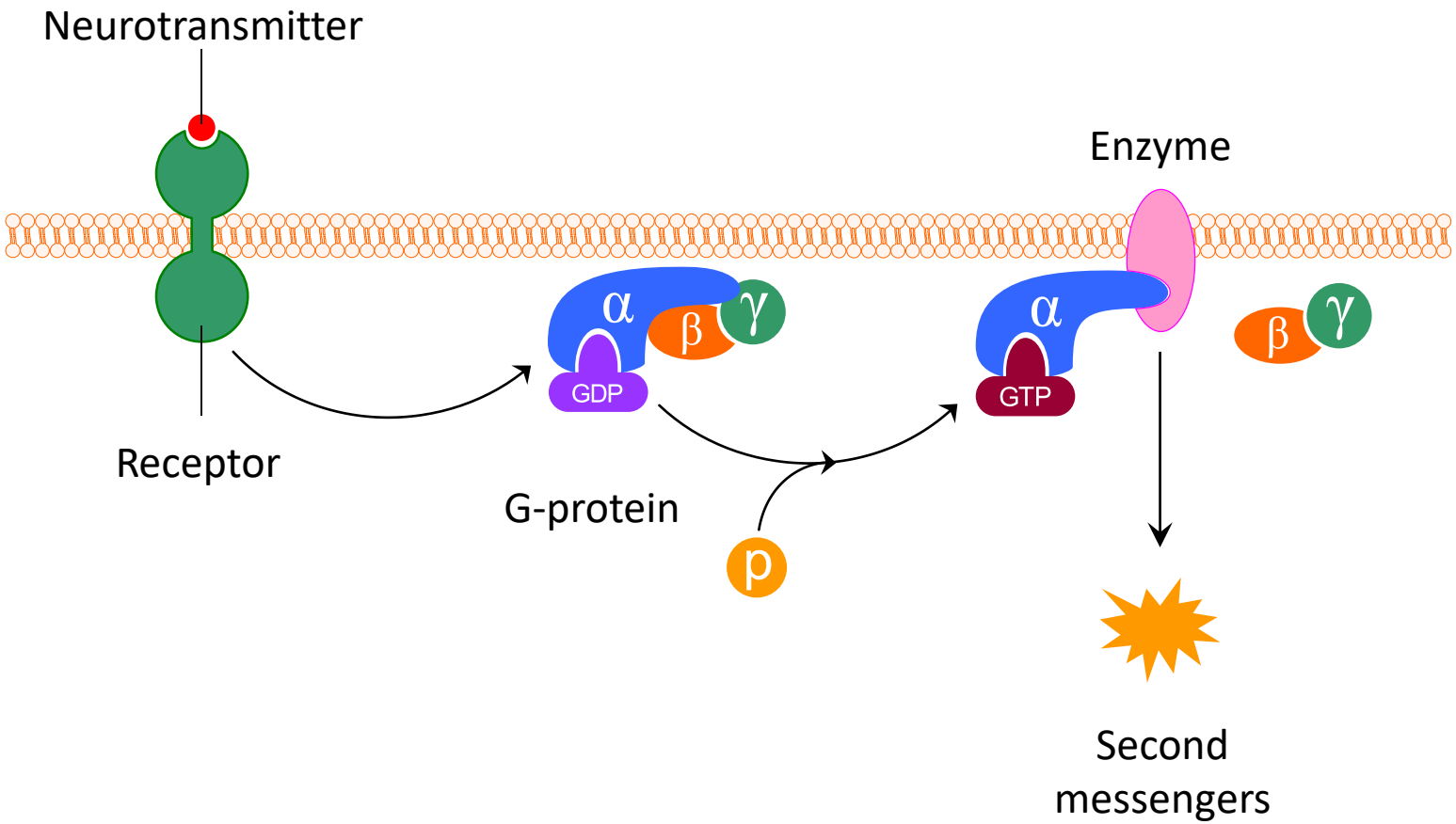
Ion channel actions via G-protein coupled receptors

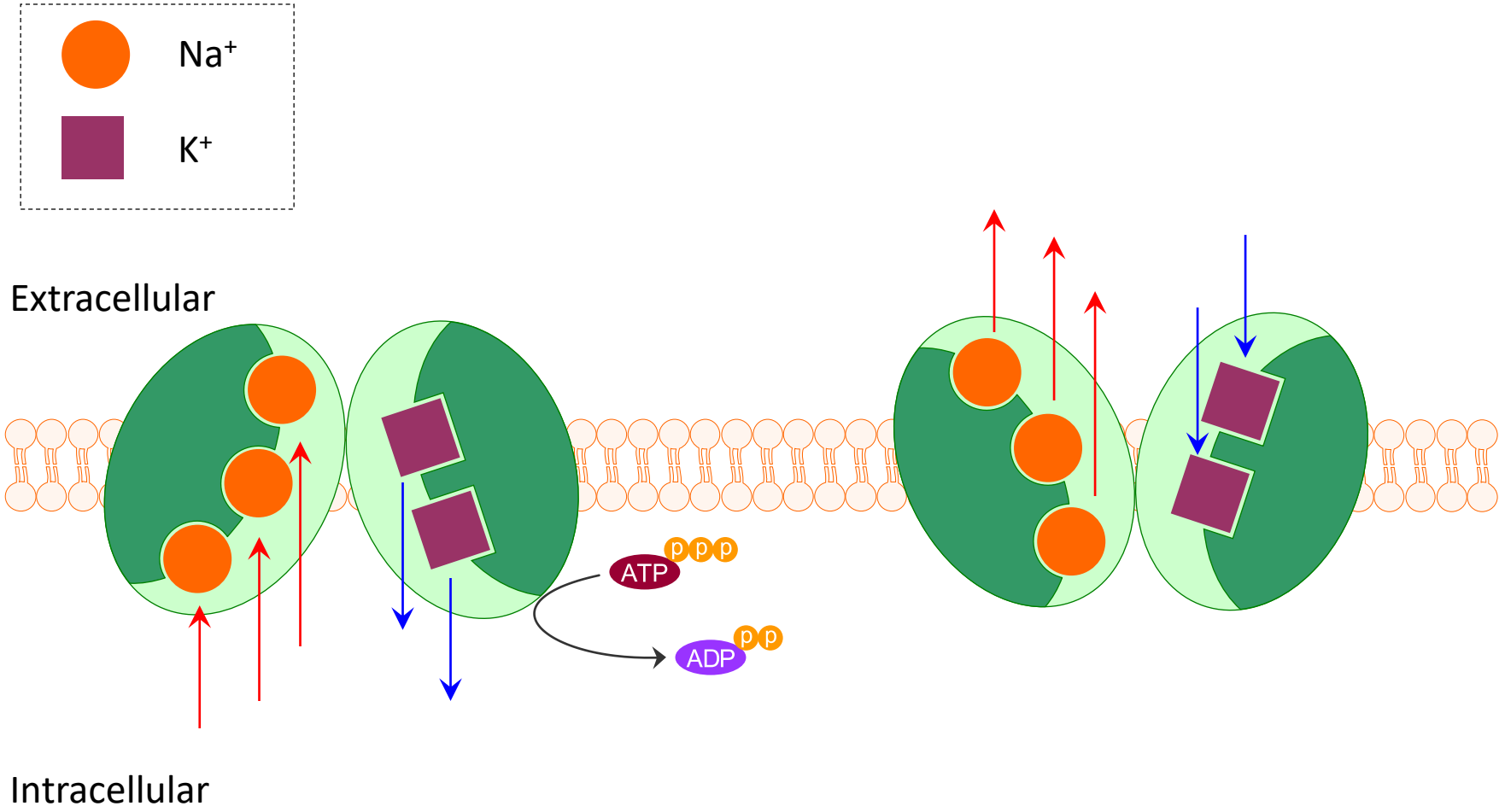


5111168

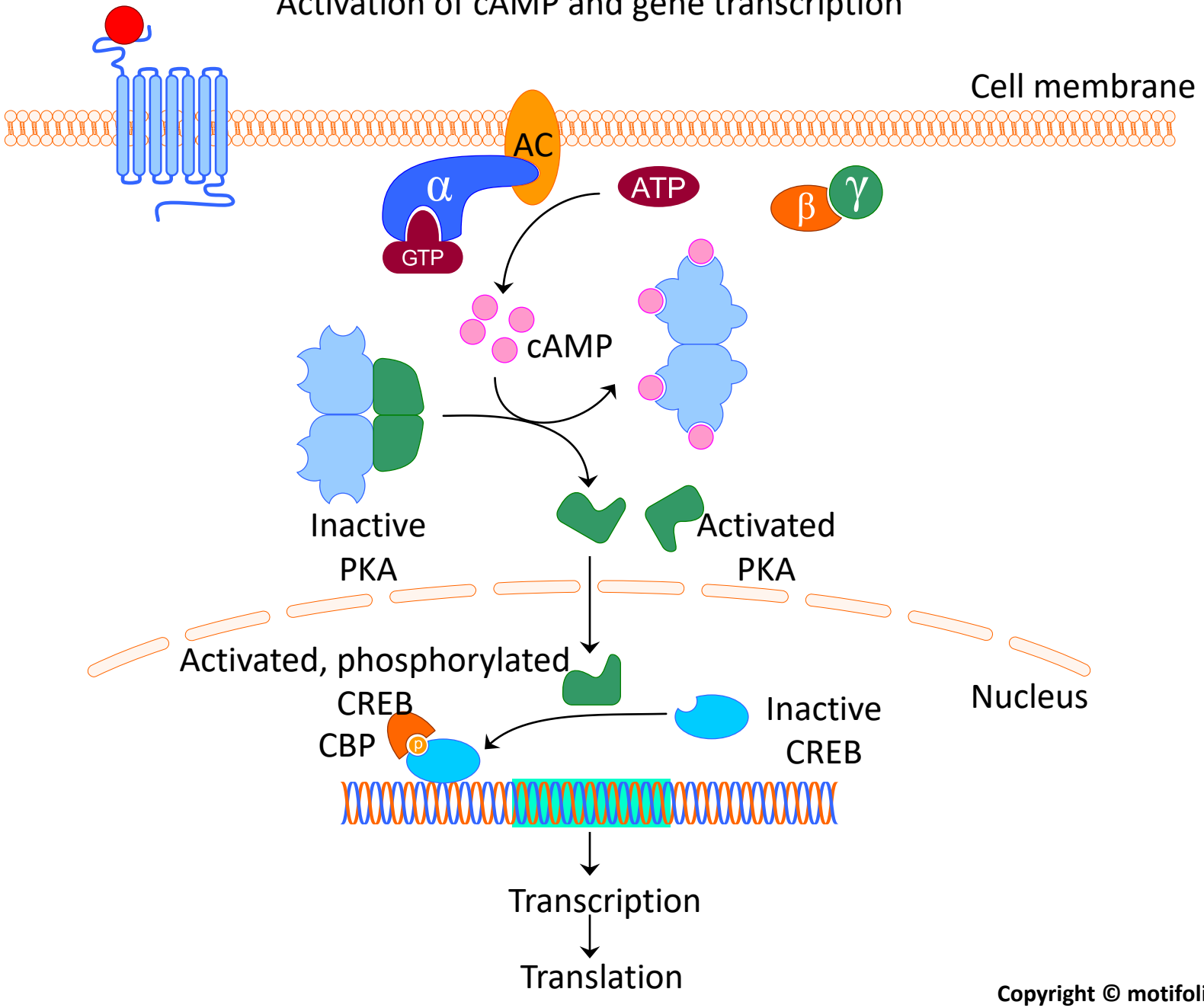
Enzyme actions via G-protein coupled receptors



Na^+ / K^+ pump

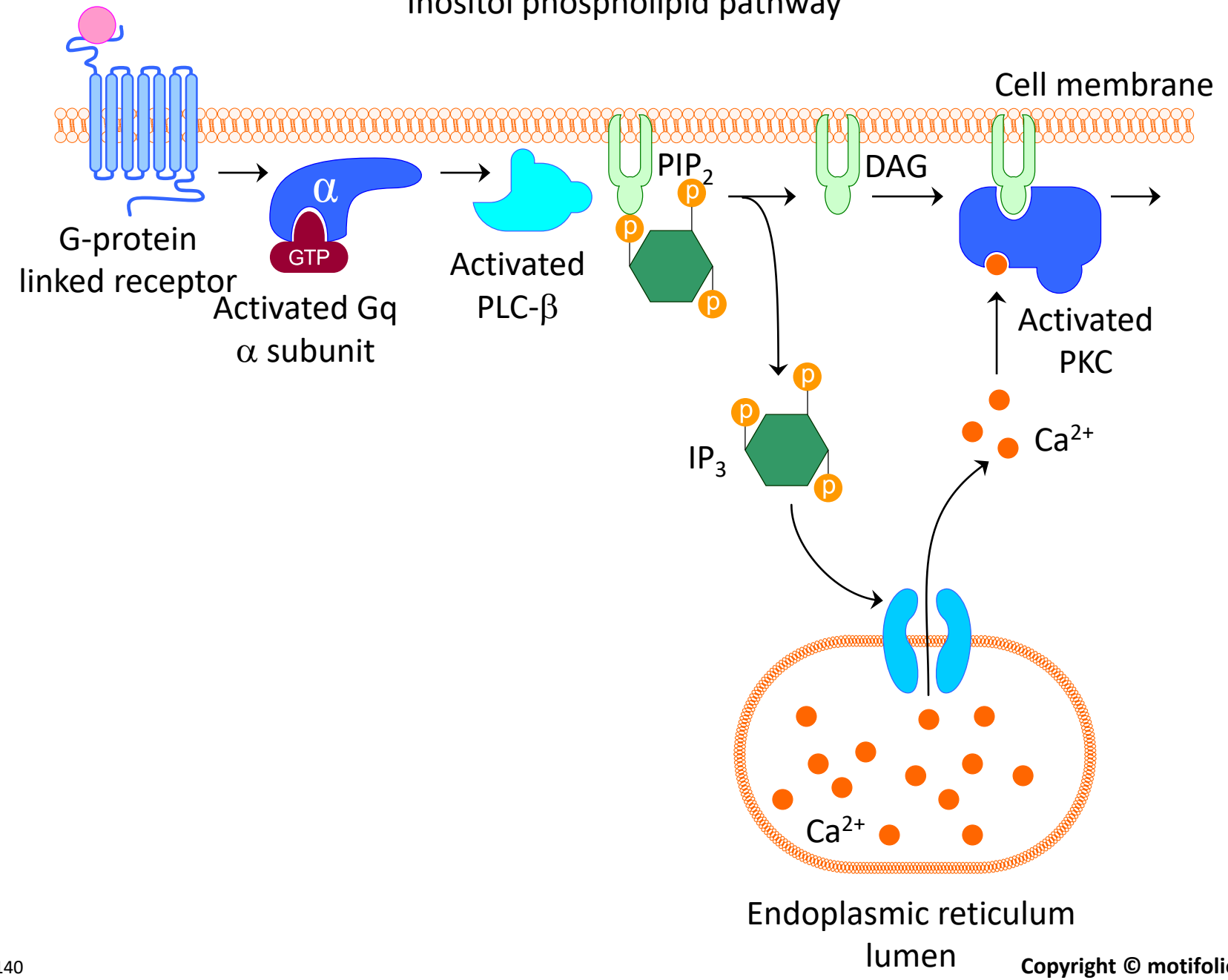


Activation of cAMP and gene transcription



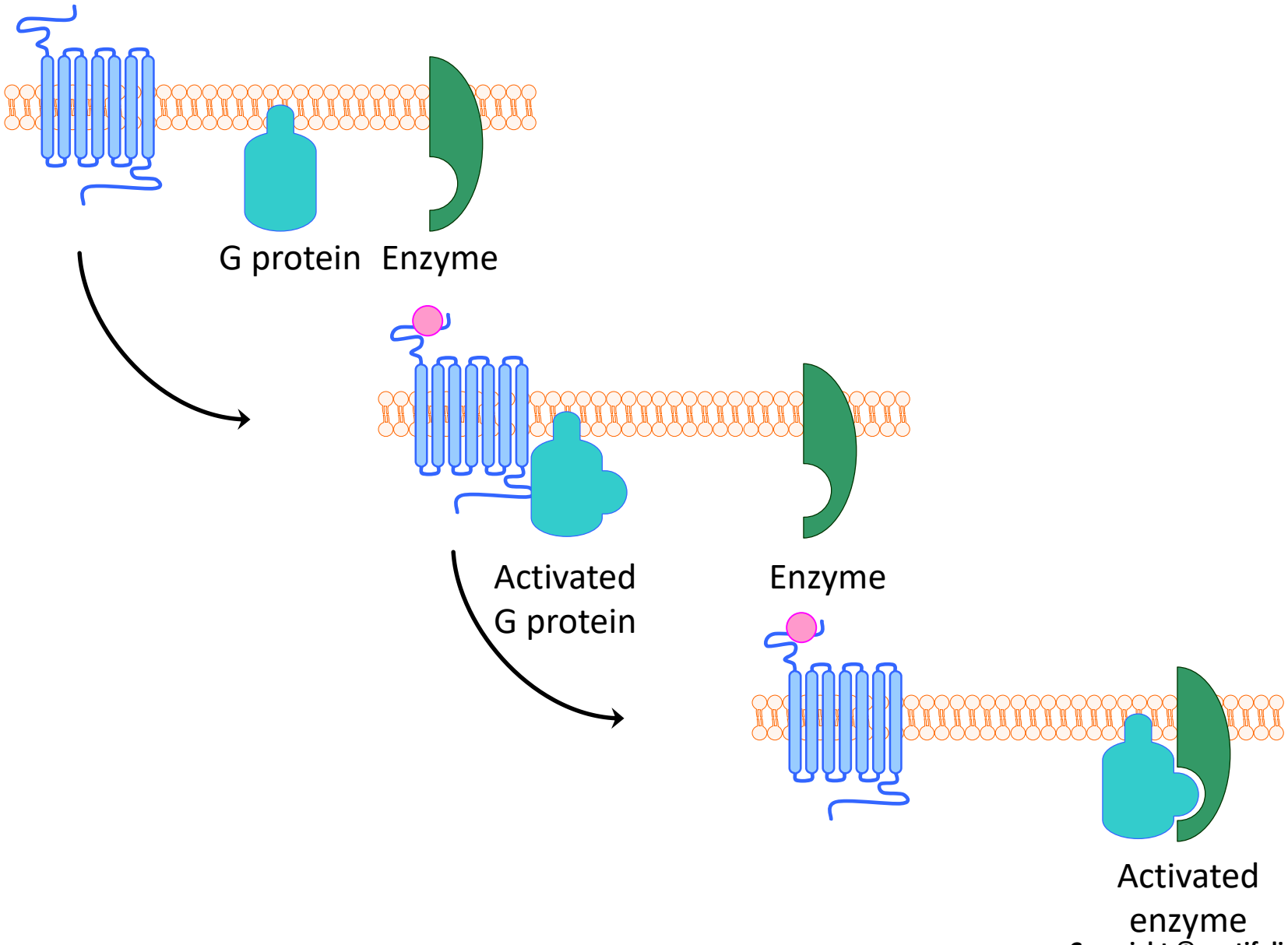
5111139

Inositol phospholipid pathway



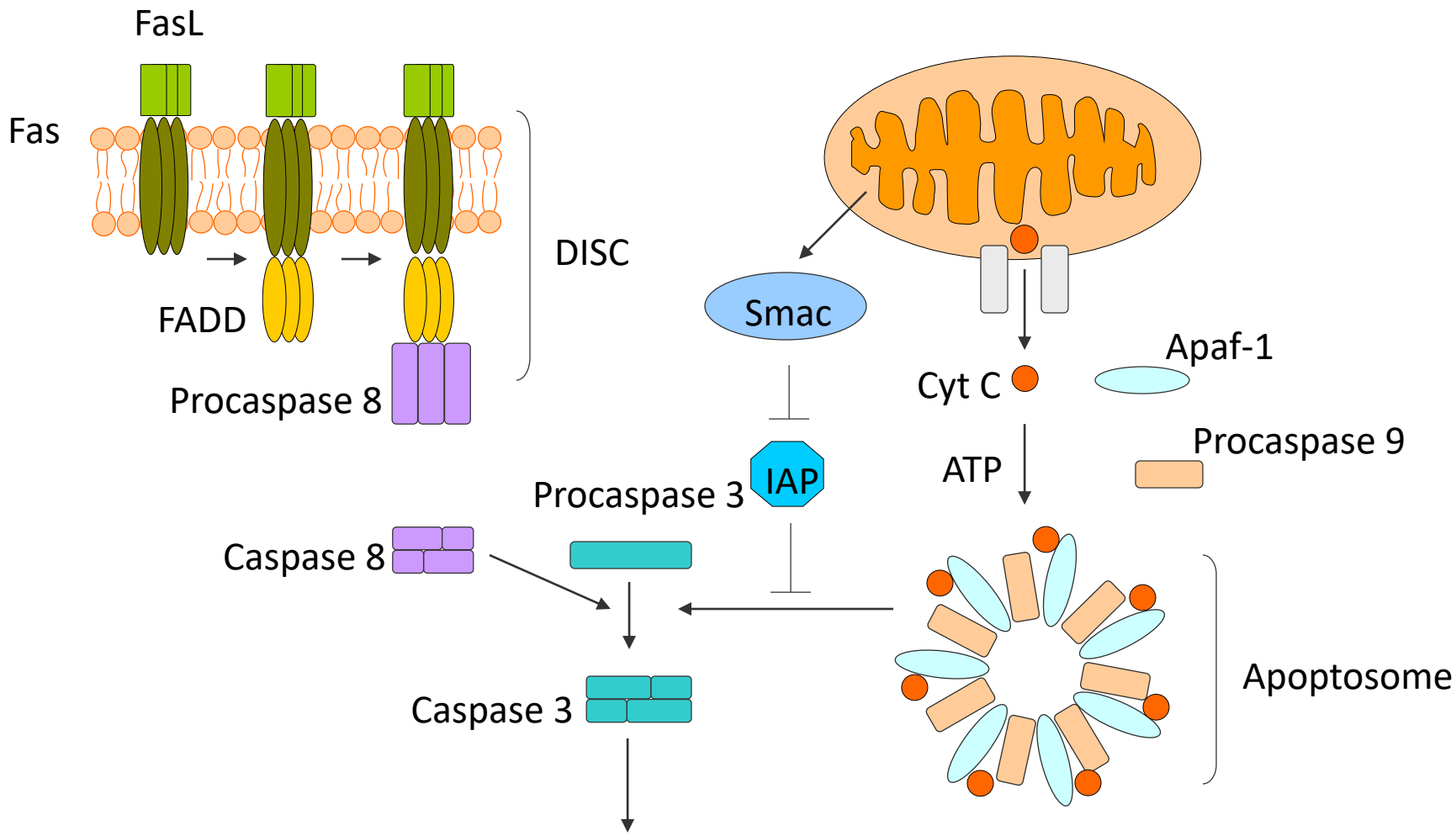
5111140

Cell surface receptors – G-protein linked receptors



5111121

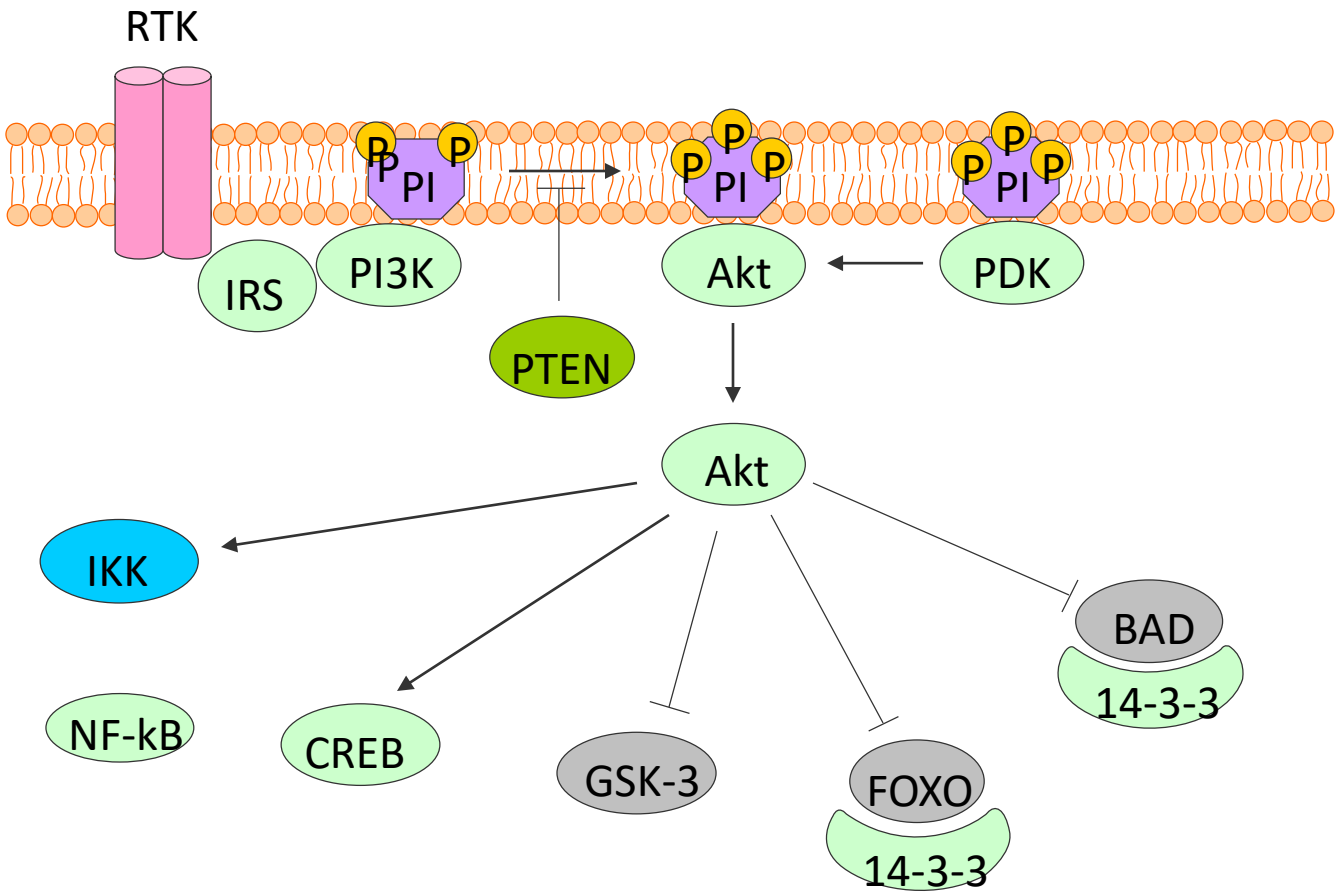
Caspase activation by the extrinsic and intrinsic pathways



Cleavage of proteins leading to cell death

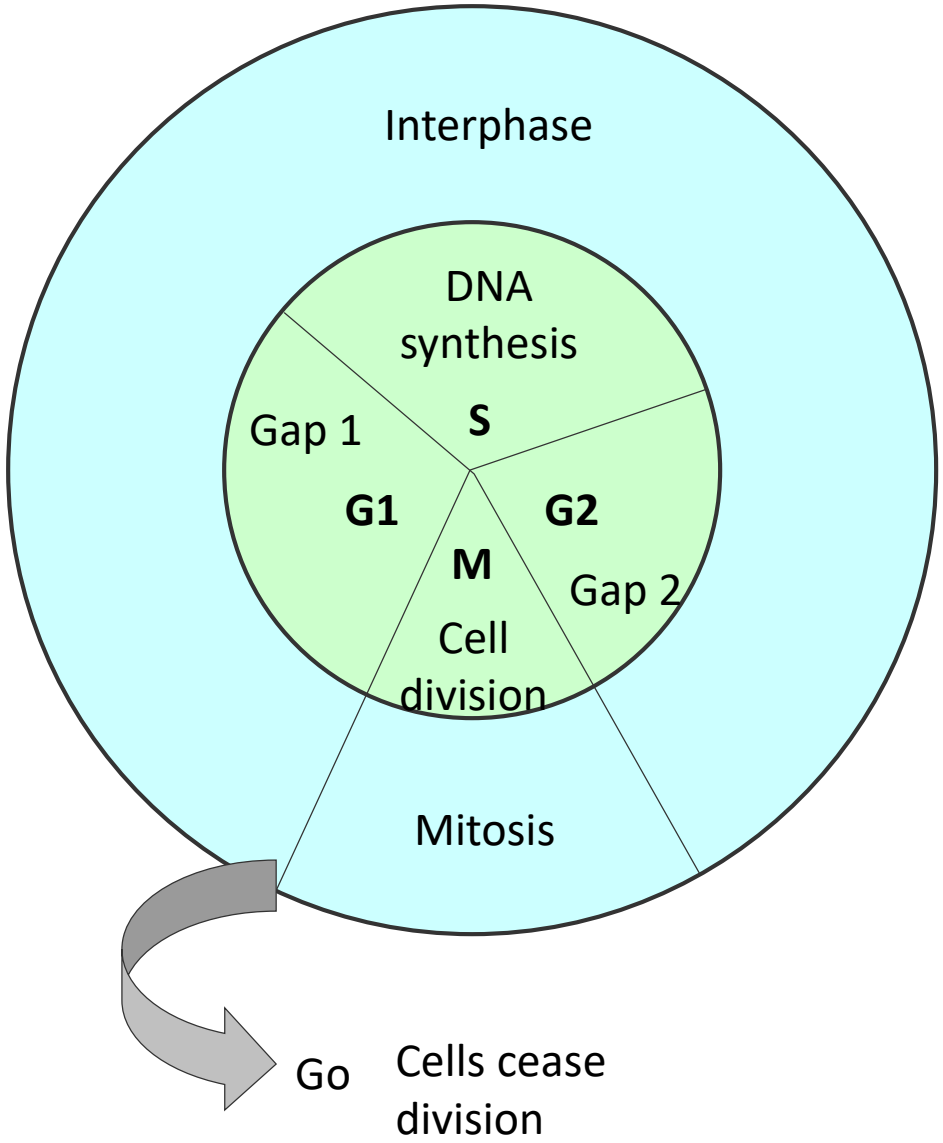
5111409

Phosphatidylinositol 3-kinase (PI3K)/Akt signaling pathway



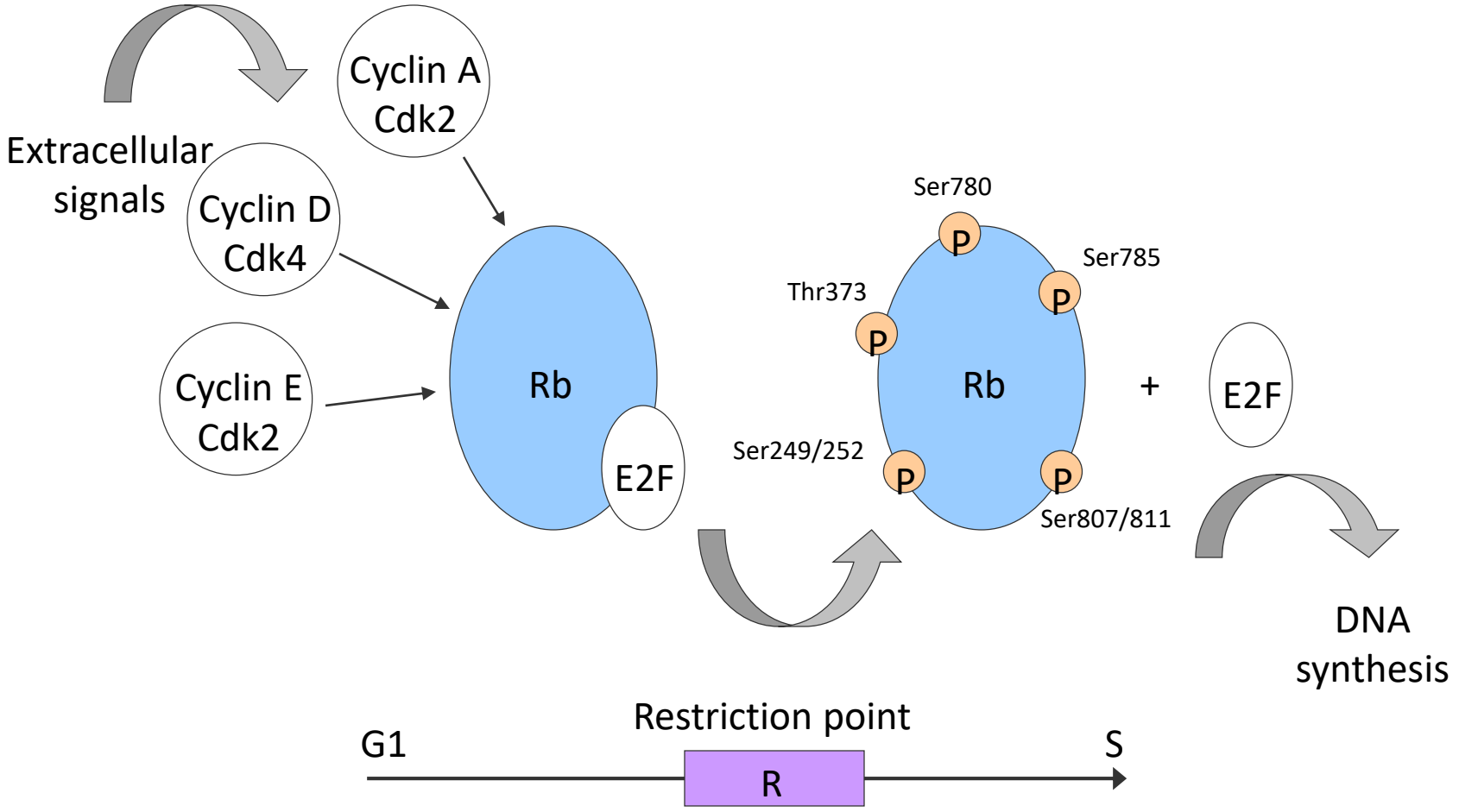
5111411

Schematic depicting the different phase of the cell cycle

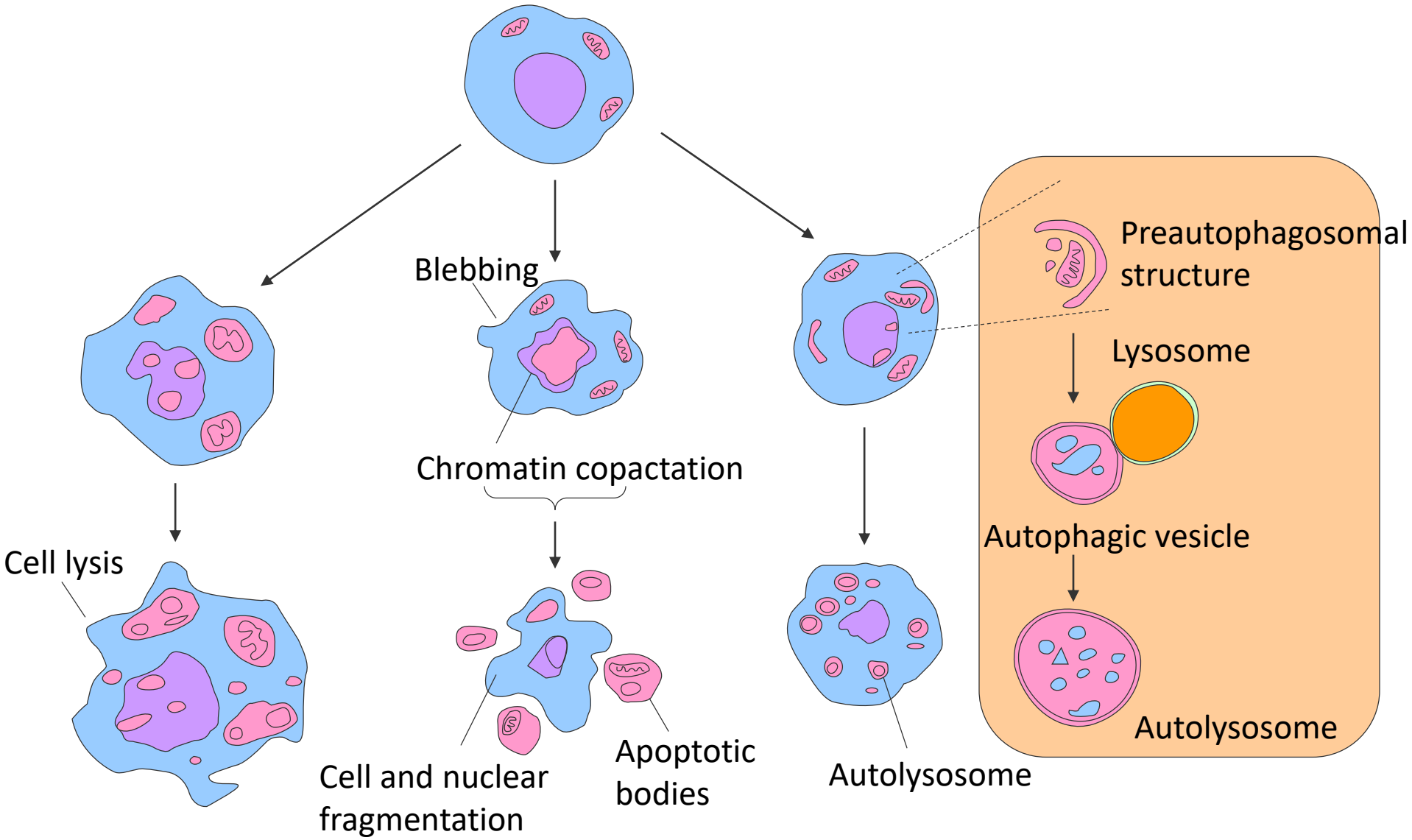


5111400

Phosphorylation of pRb by cyclin/cyclin-dependent kinase (CDK) complexes



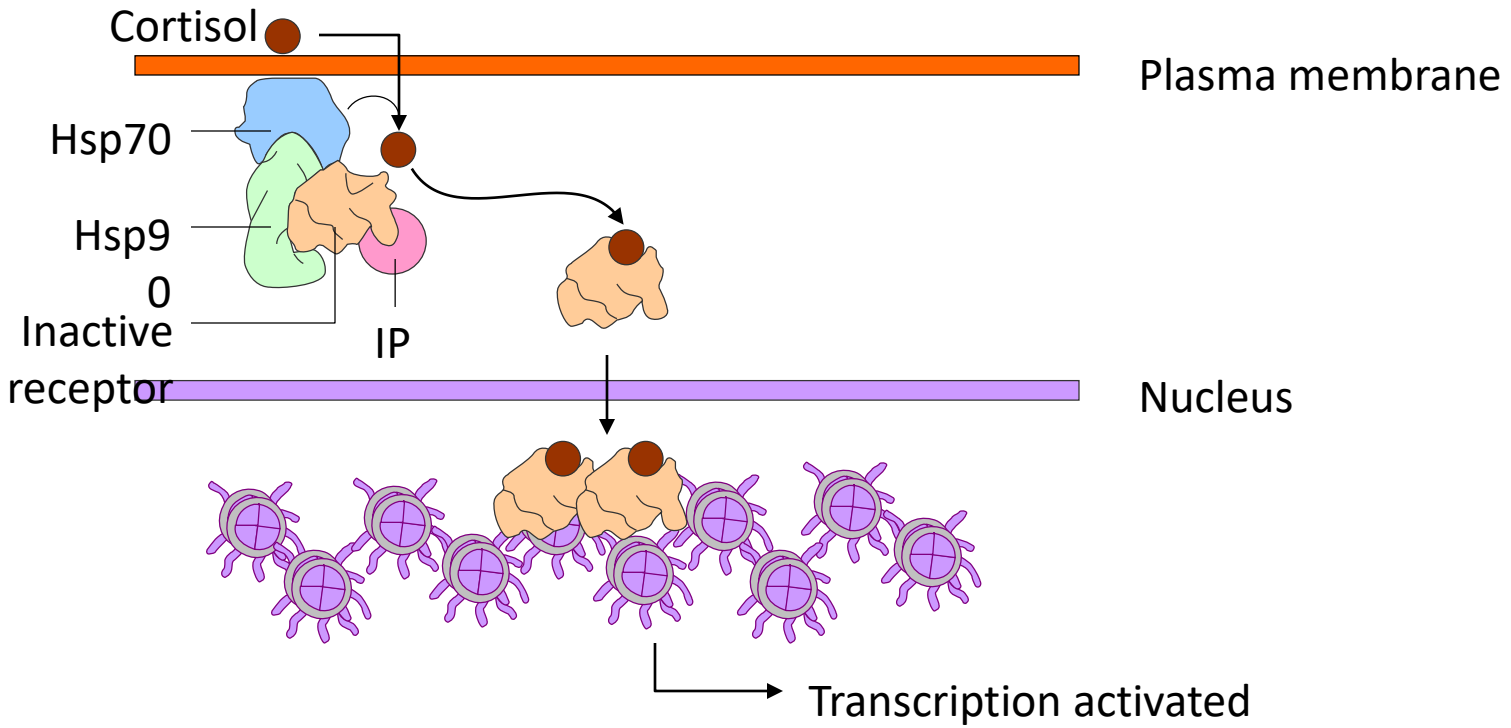
Different forms of cell death



5111406

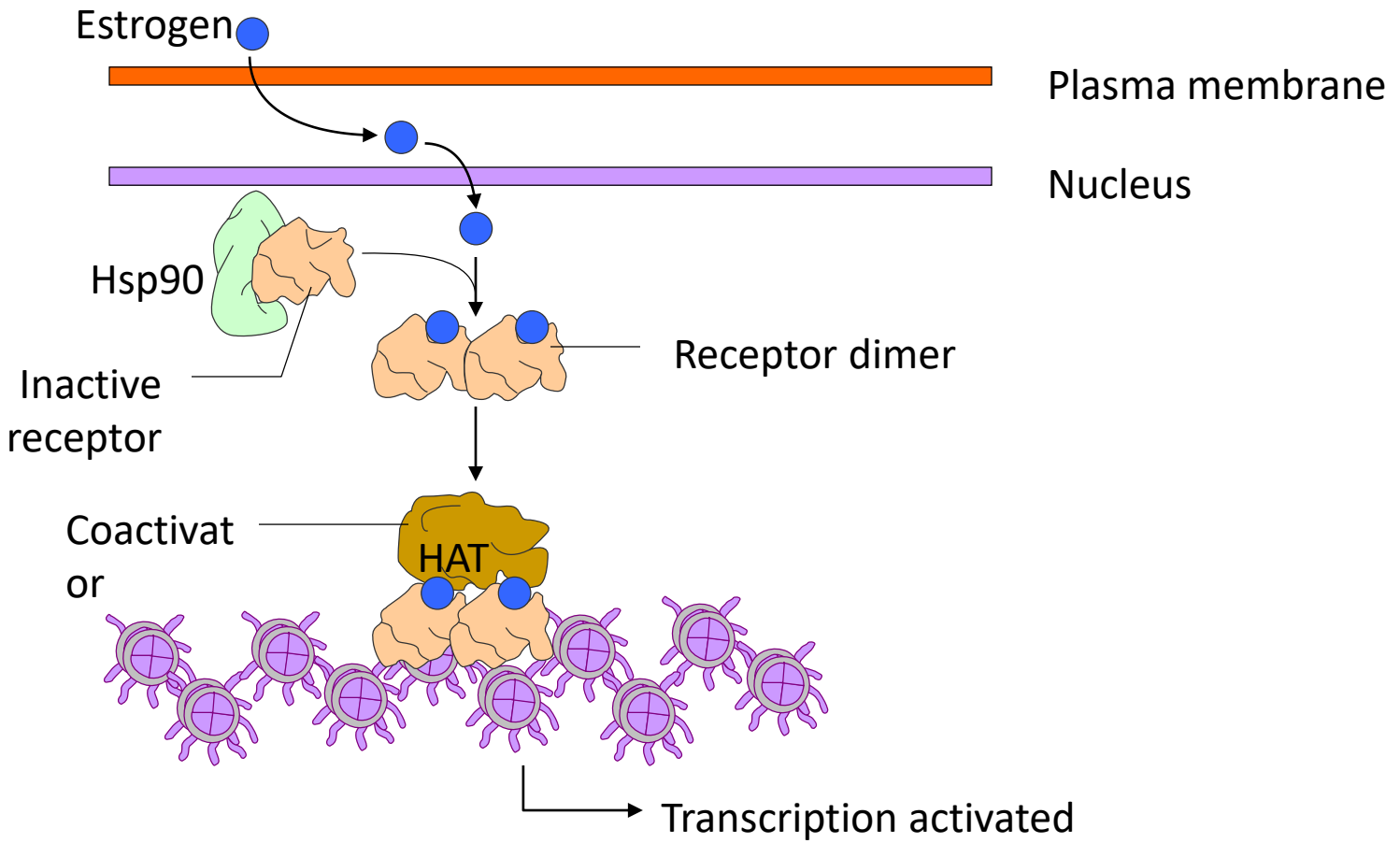
Gene regulation by members of the nuclear receptor superfamily

A. Glucocorticoid receptor



Gene regulation by members of the nuclear receptor superfamily

B. Estrogen receptor

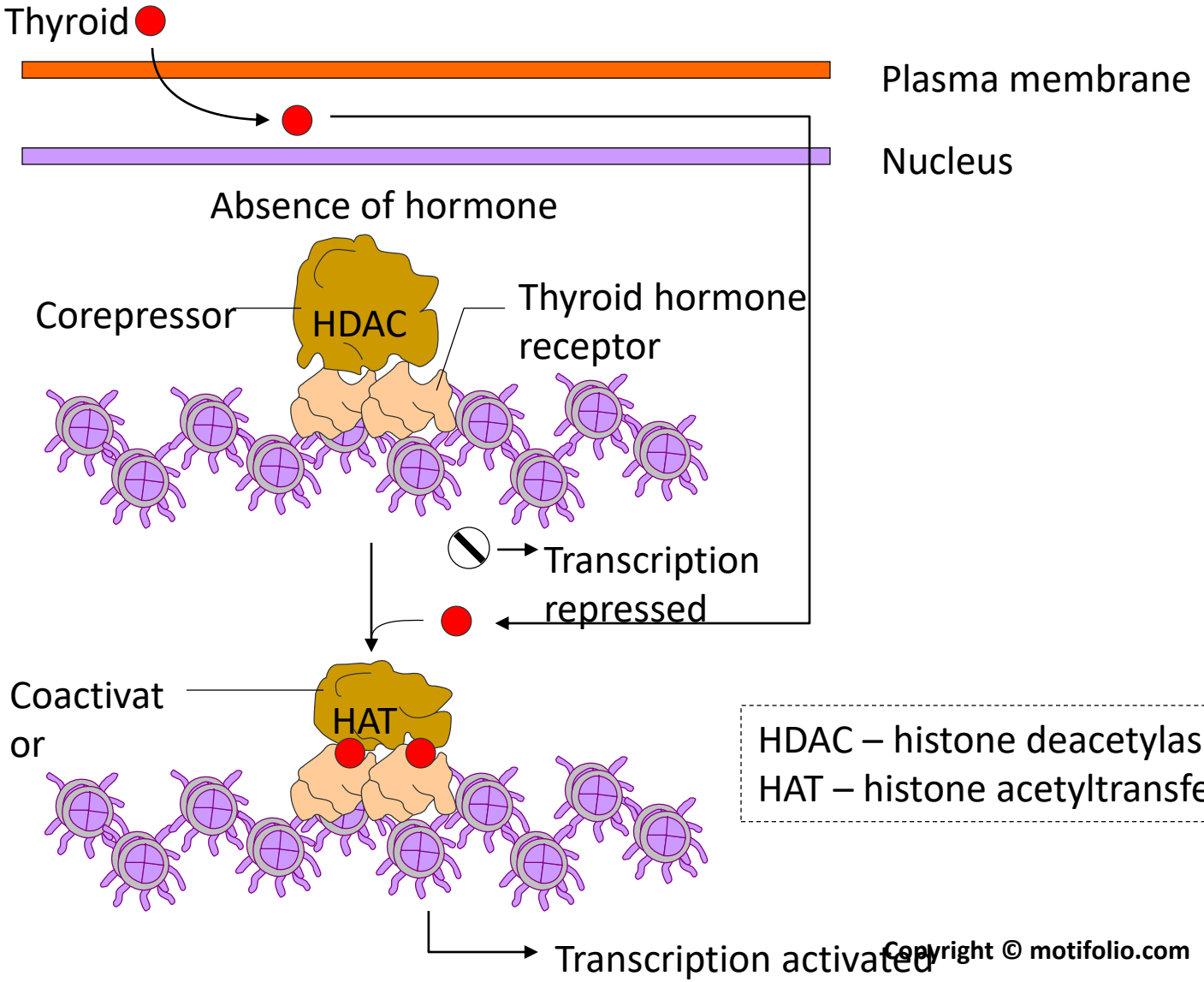


HAT – histone acetyltransferase

5111363

Gene regulation by members of the nuclear receptor superfamily

C. Thyroid receptor

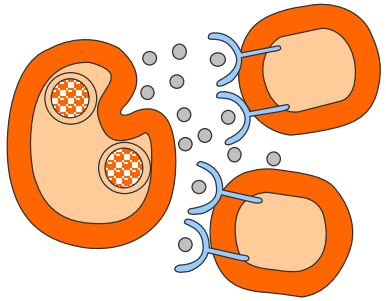


HDAC – histone deacetylase
HAT – histone acetyltransferase

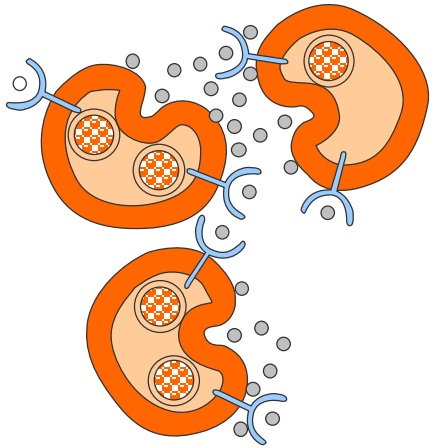
5111364

General schemes of intercellular signaling

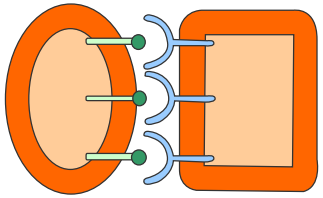
A. Paracrine signaling



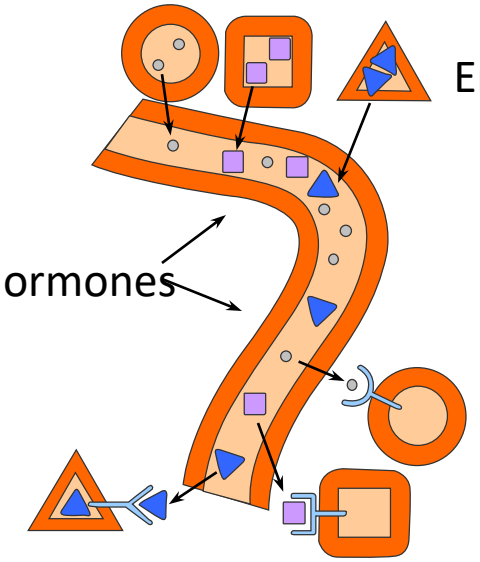
B. Autocrine signaling



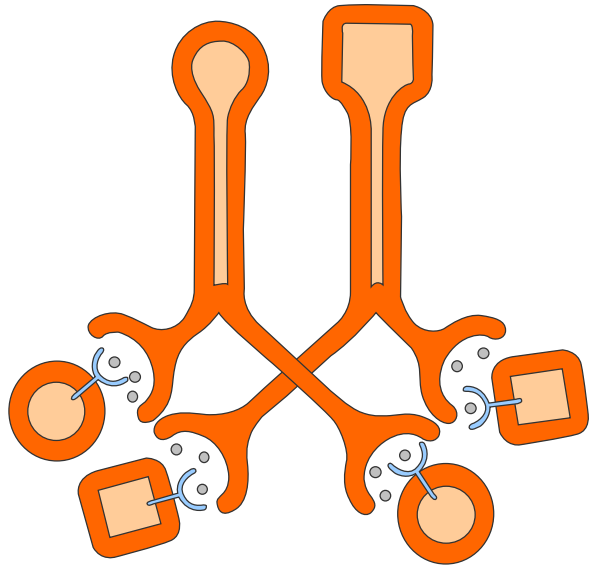
C. Juxtracrine signaling



D. Endocrine signaling

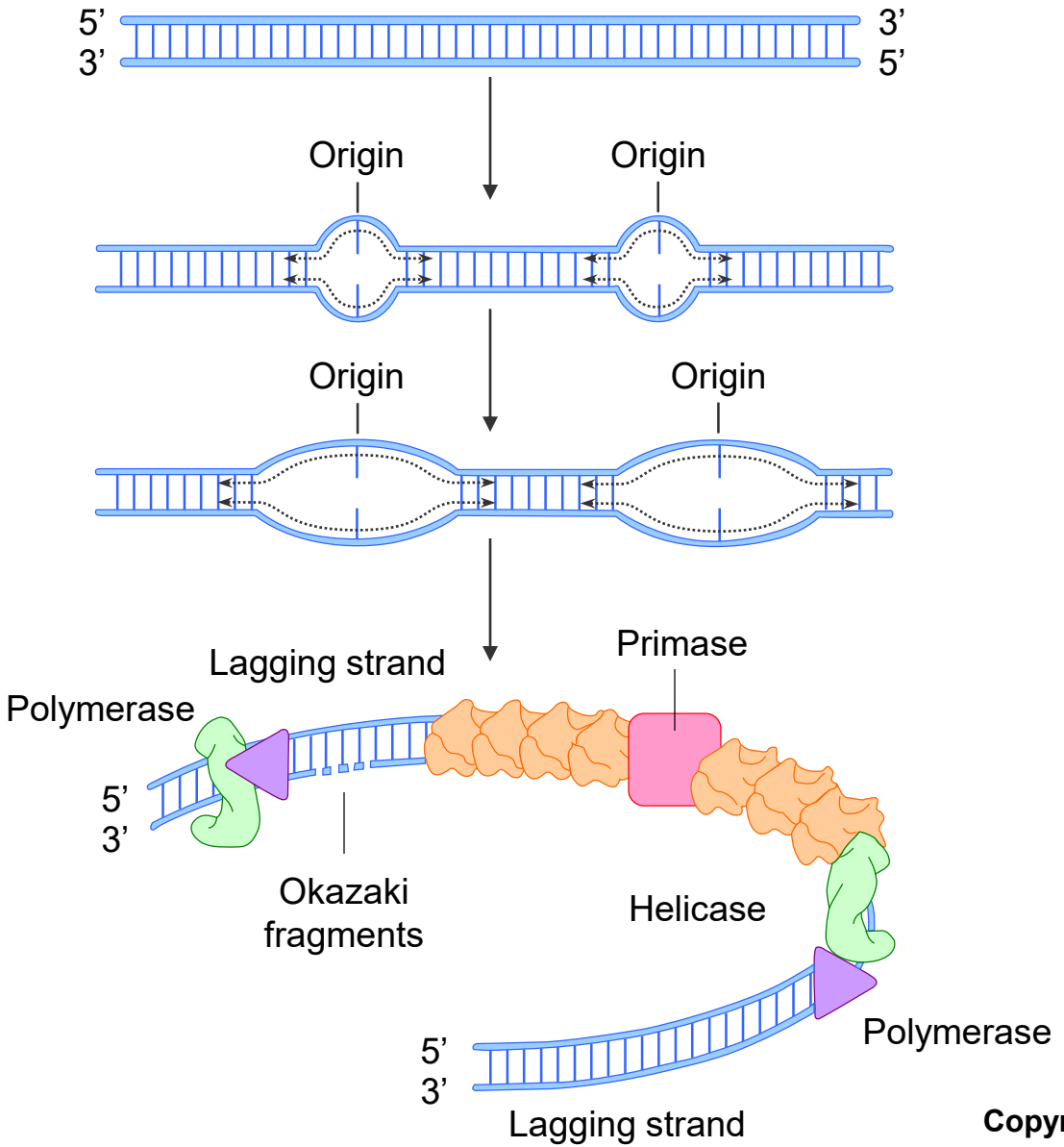


E. Synaptic signaling



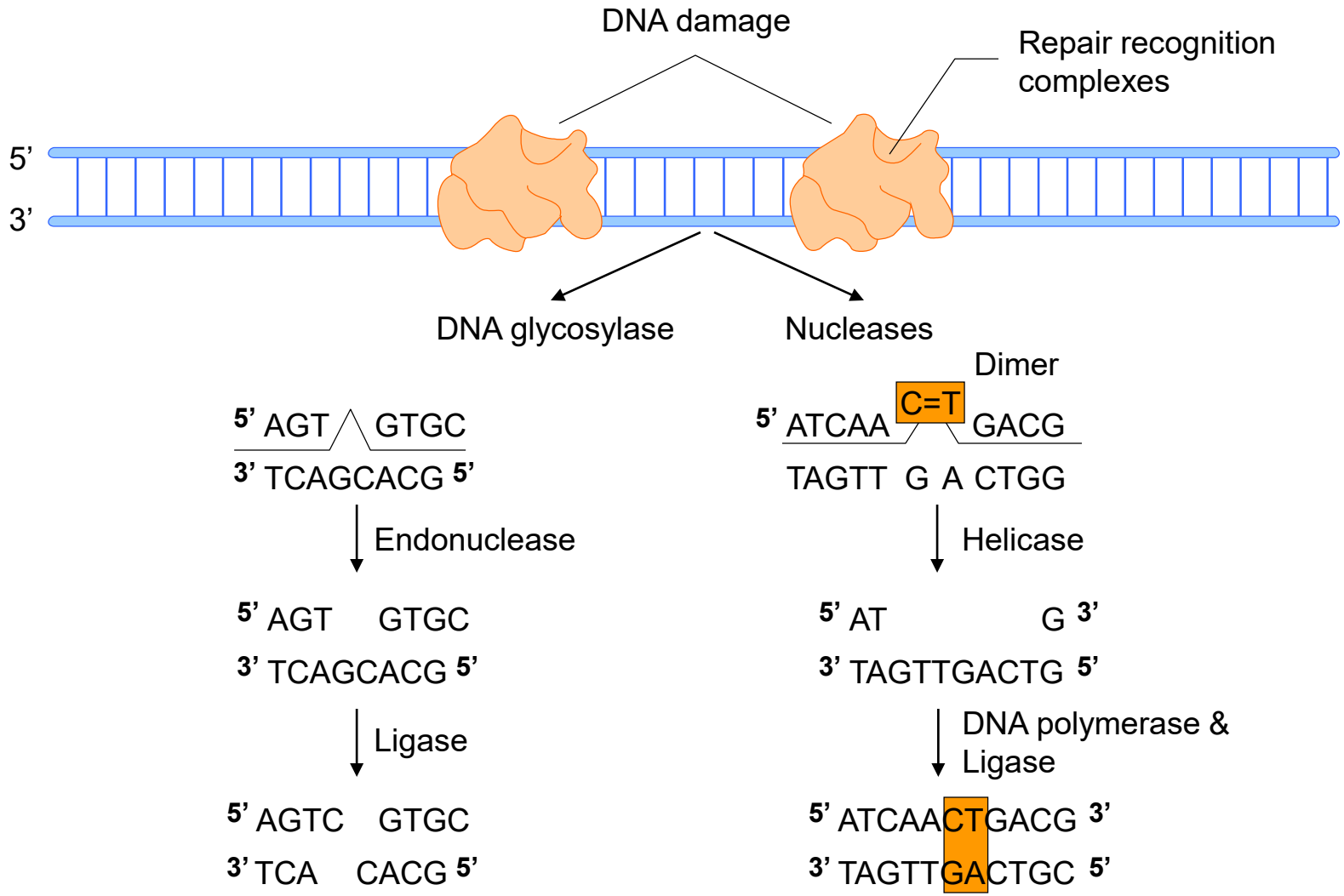
5111361

Events leading to chromosome replication



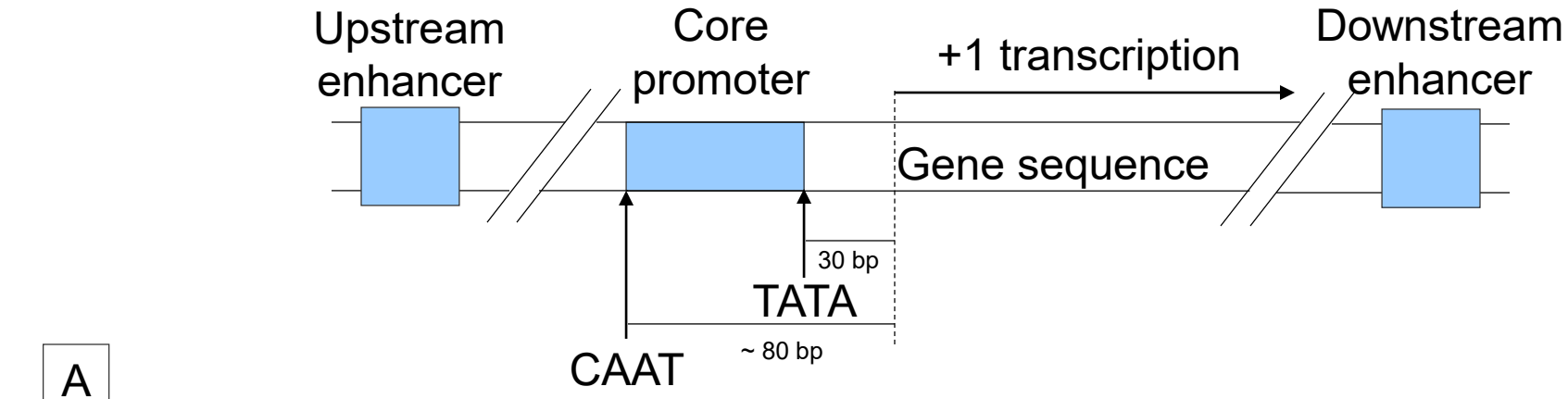
5111304

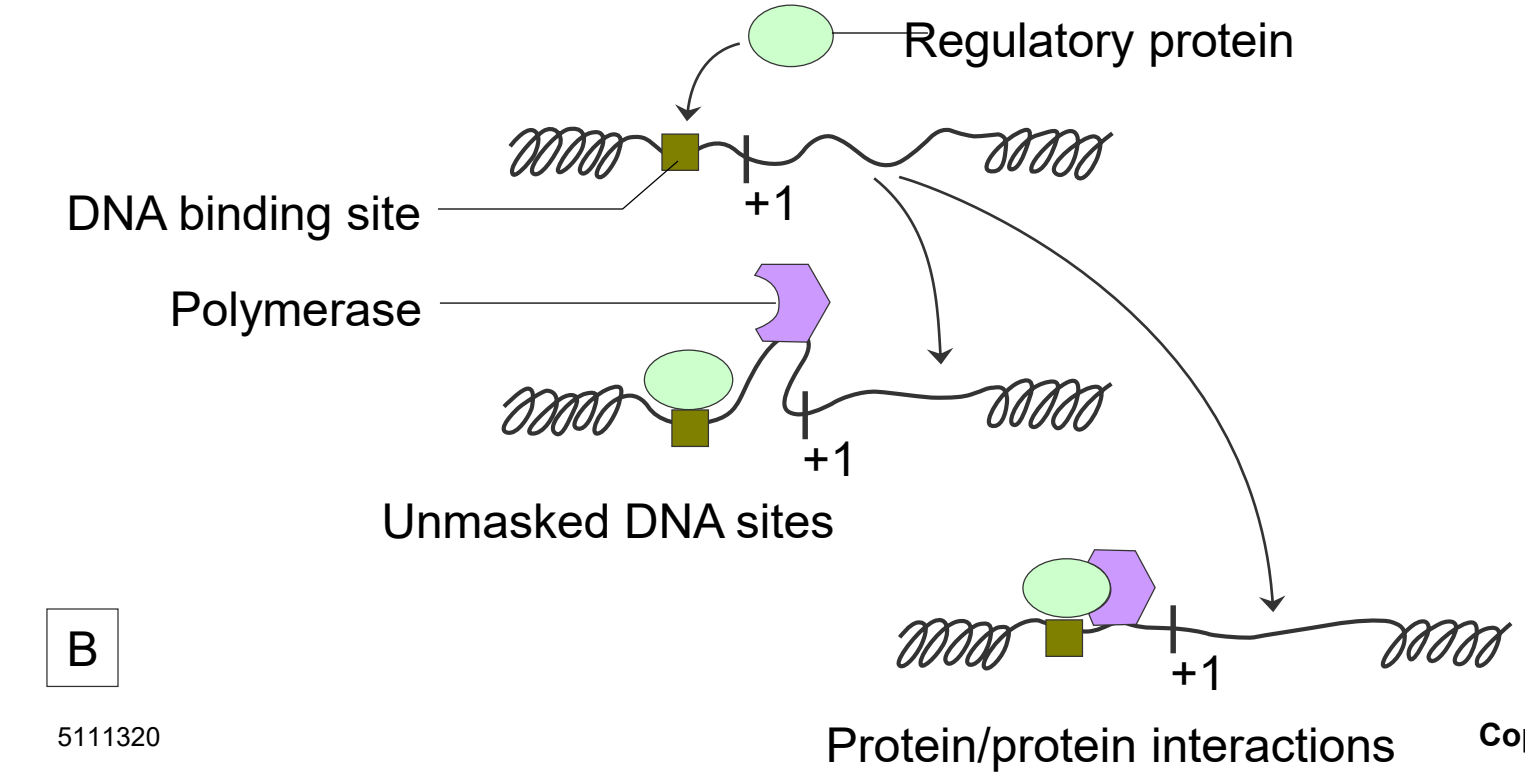
Major events of DNA repair process in eukaryotic cells



5111305

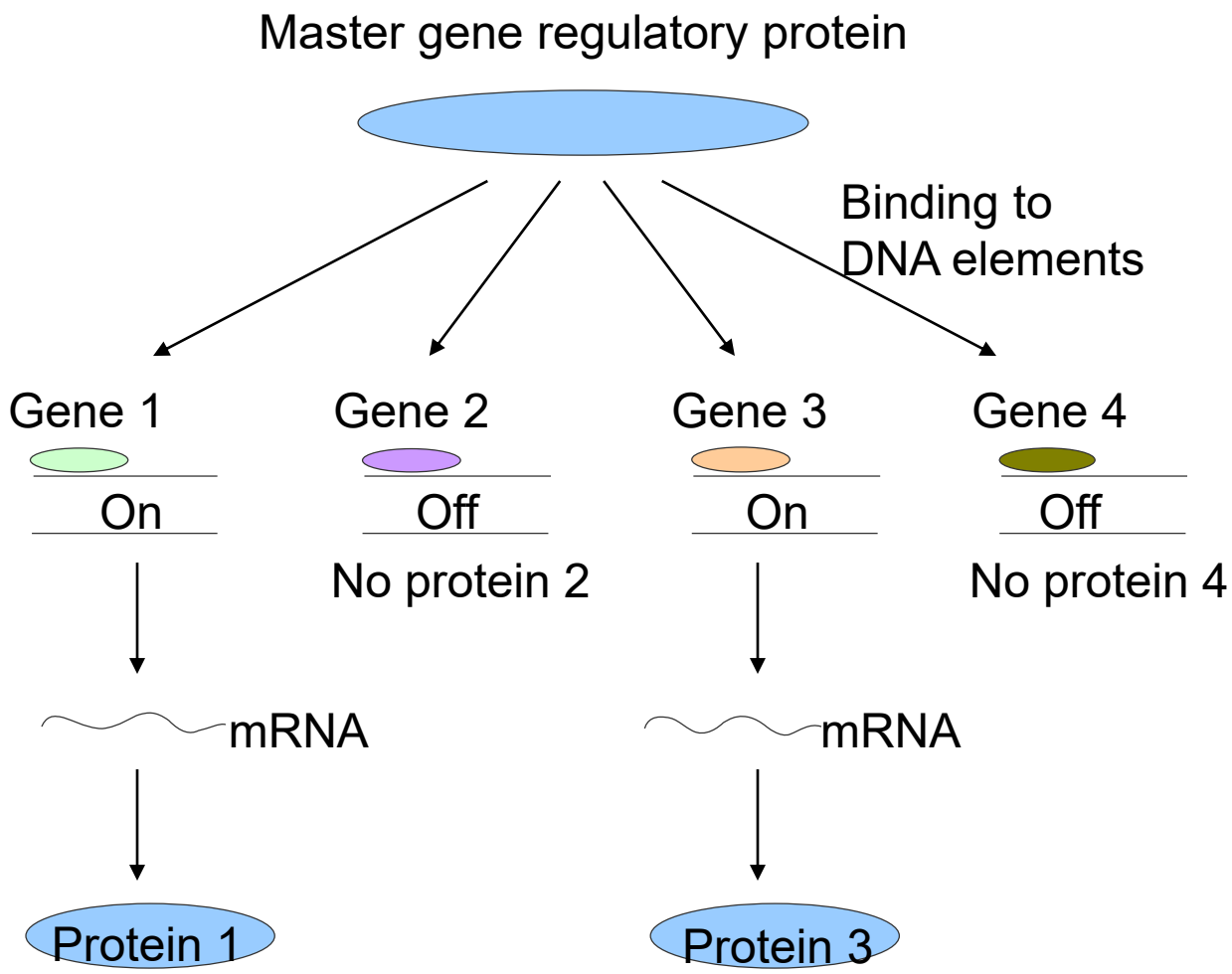
DNA segments that can modulate transcription by binding gene regulatory proteins





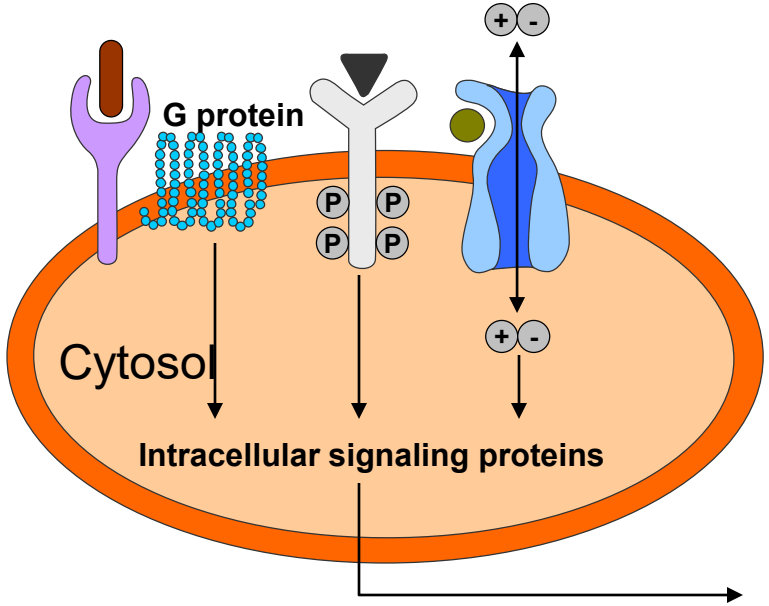
5111320

Scheme of the activity of a master gene



Intracellular signaling molecules

A. Cell-surface receptor



B. Intracellular receptor