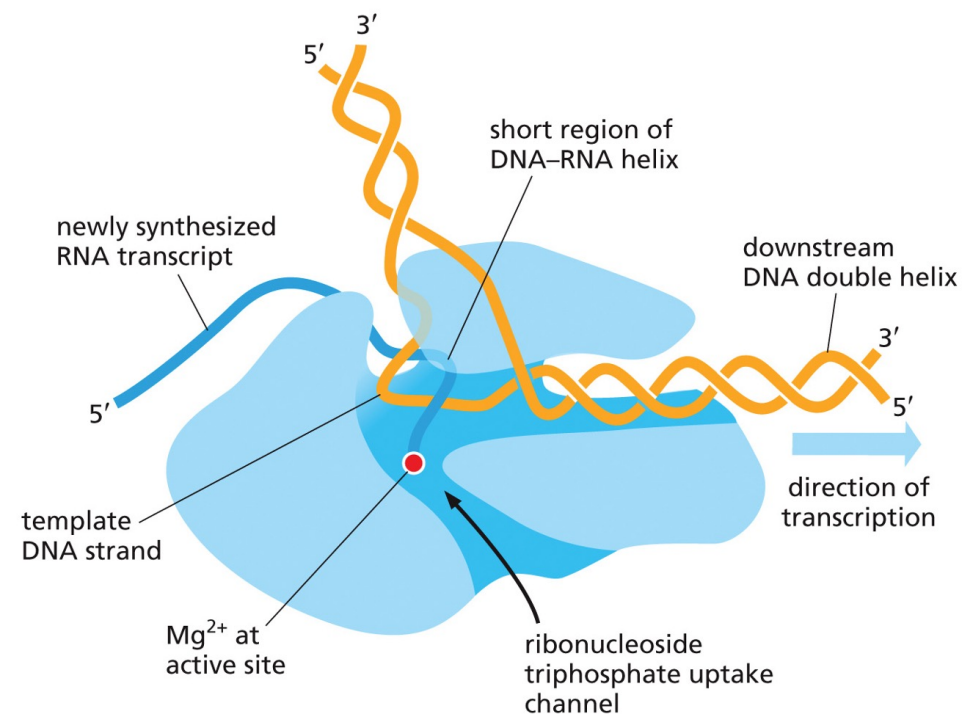
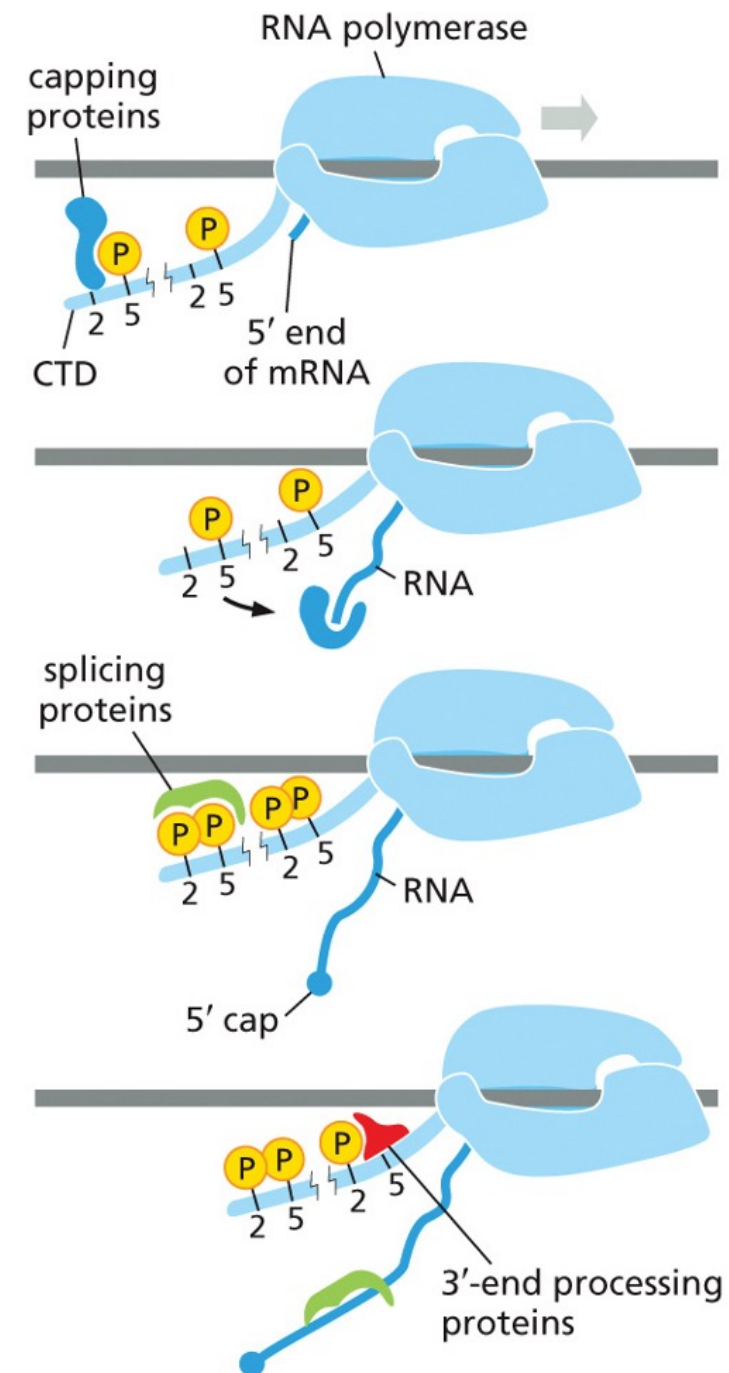


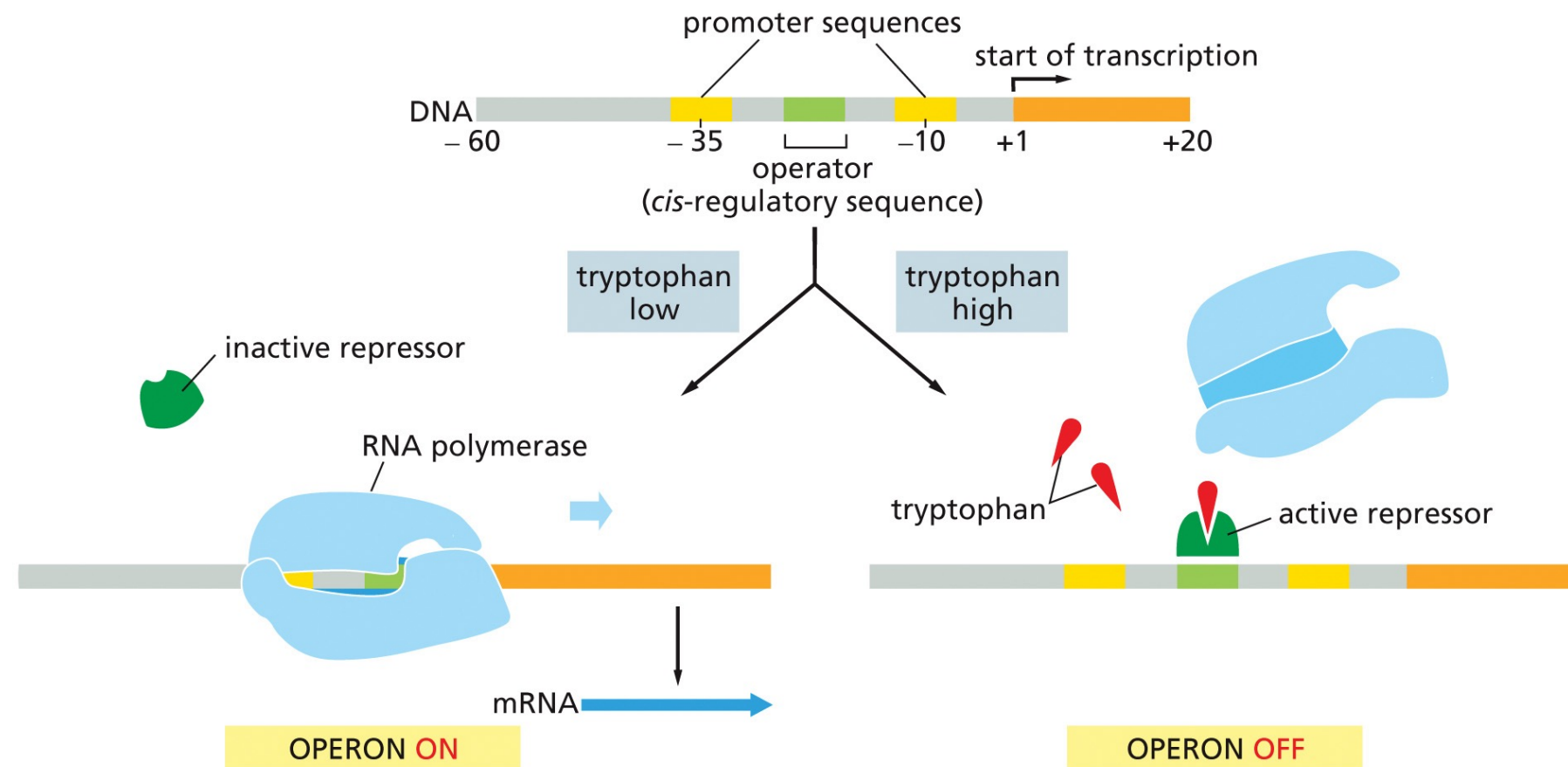
Transcription is carried out by RNA Polymerases



Adapted from P. Cramer et al., *Science* 288:640–649, 2000. PDB code: 1HQM.

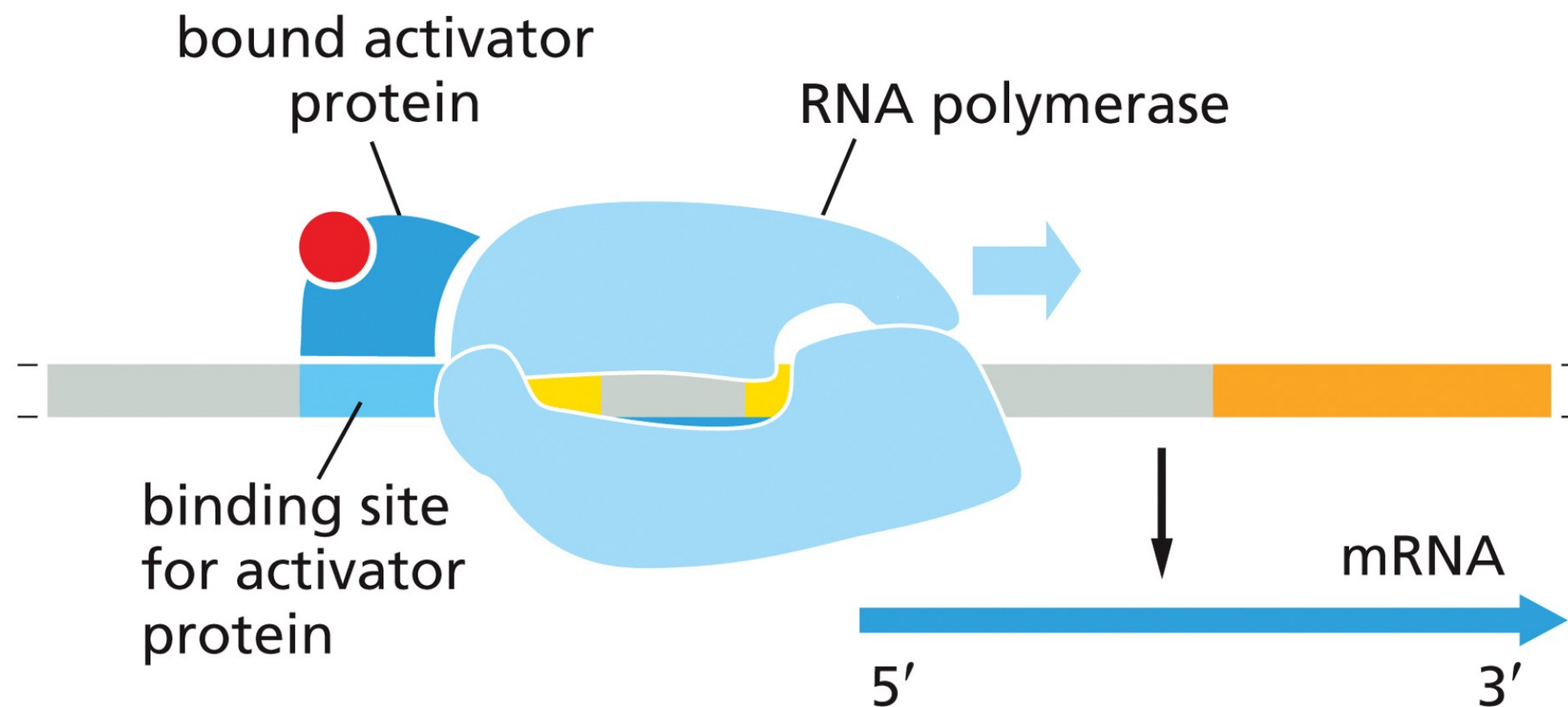


Proteins called “Transcription Factors” (TFs) help to recruit or exclude RNA Polymerase from binding upstream of different genes



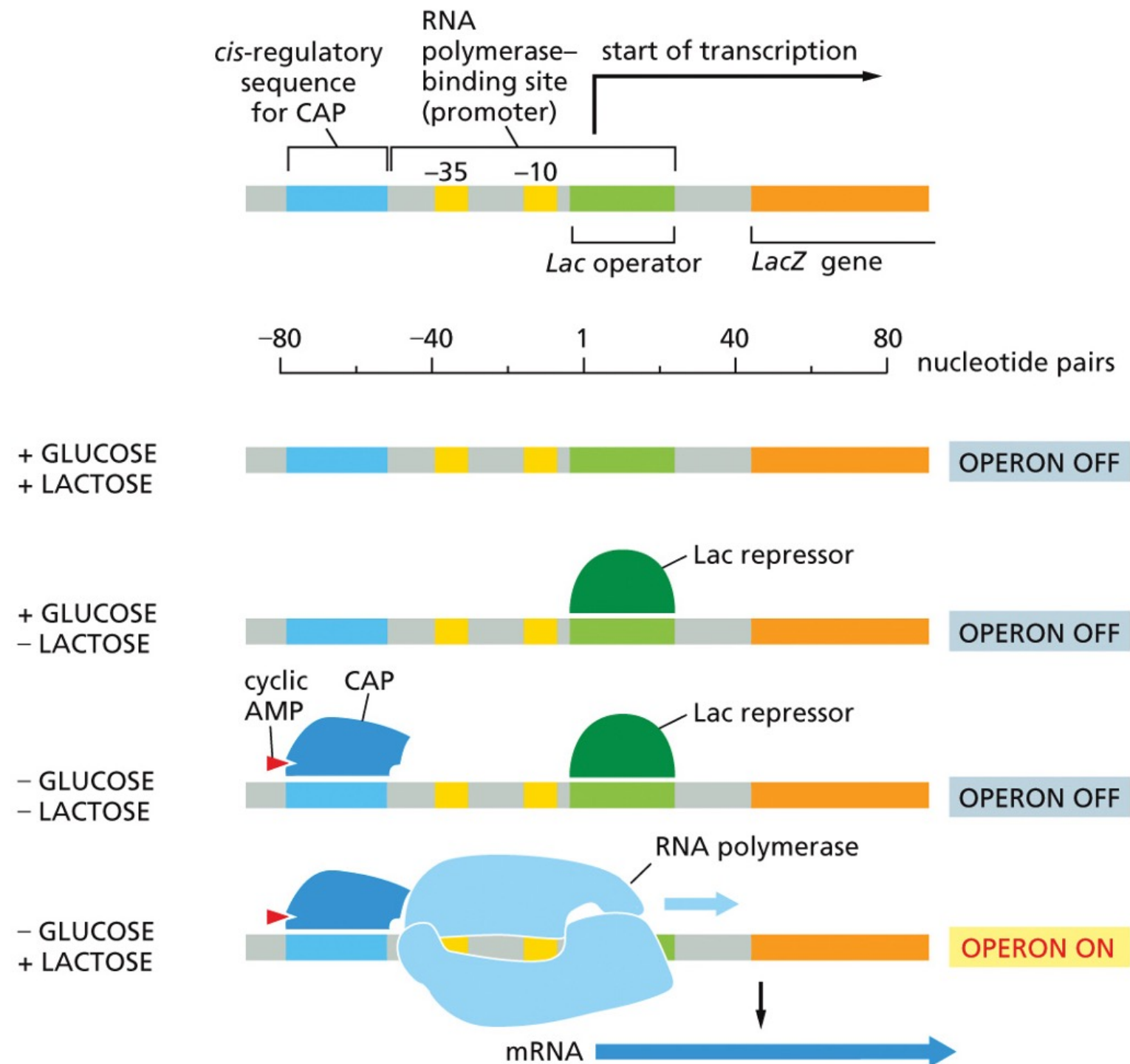
Transcriptional Repressor

Proteins called “Transcription Factors” (TFs) help to recruit or exclude RNA Polymerase from binding upstream of different genes

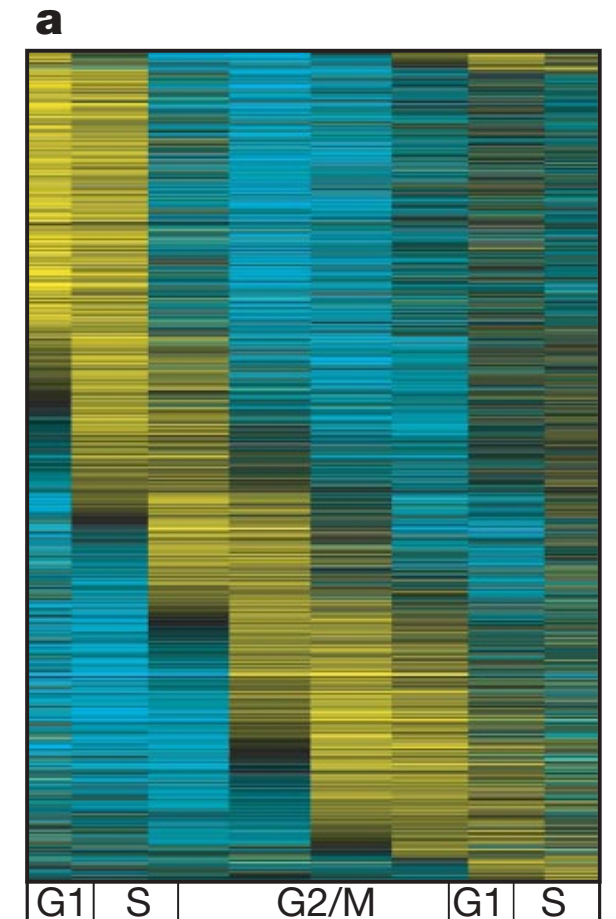
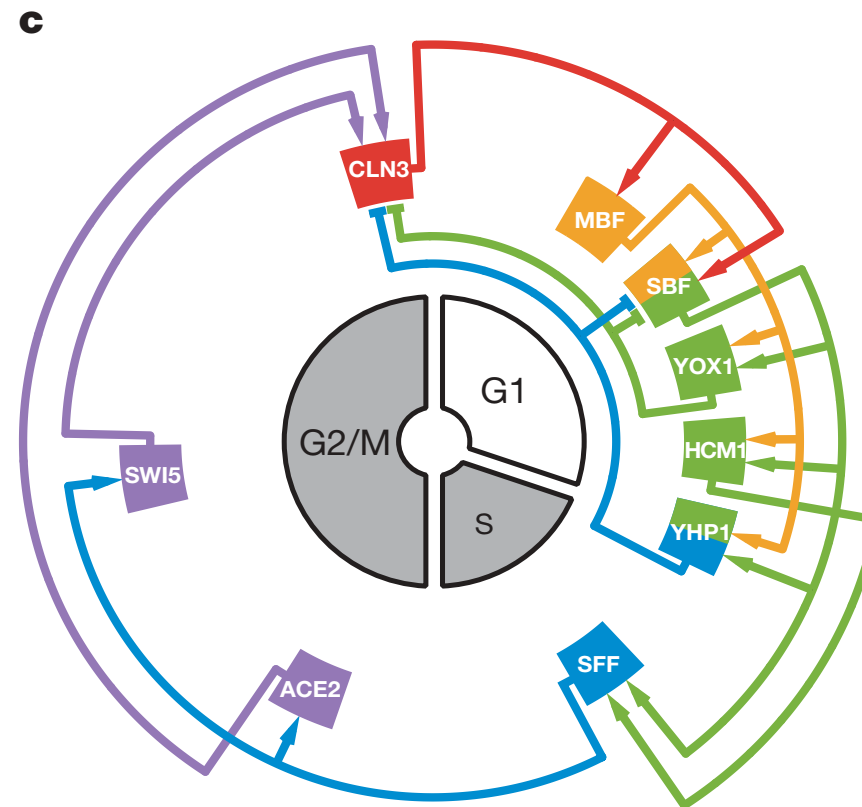
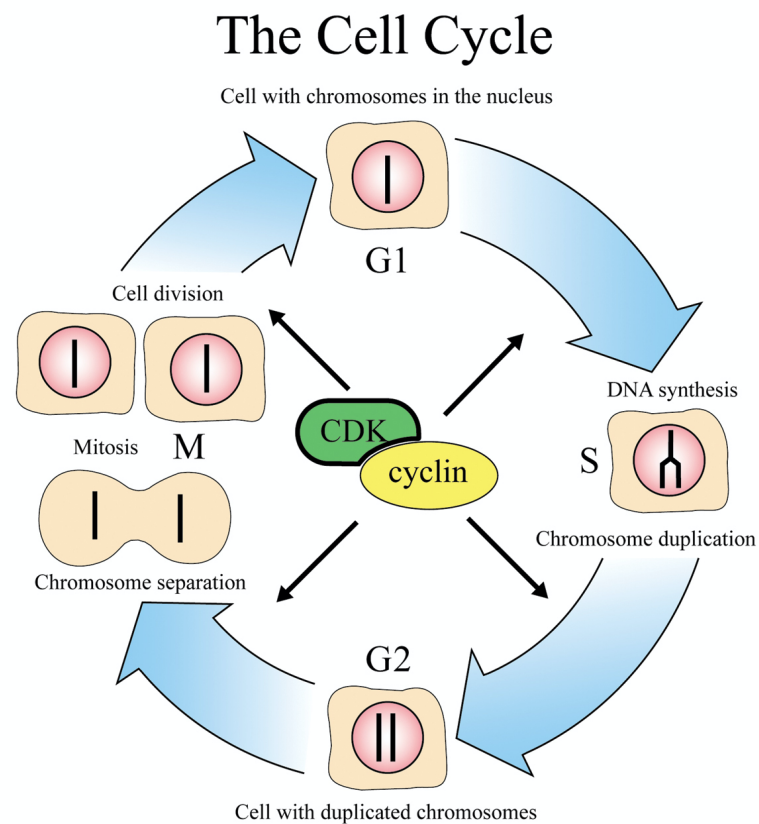


Transcriptional Activator

The combinatorial states of multiple TFs regulate gene expression in response to different signals, in different tissues, or at different times



Transcriptional regulation during the yeast cell cycle



Complex networks of transcription factors regulate differentiation and development in multi-cellular eukaryotes

Sea urchin embryogenesis

