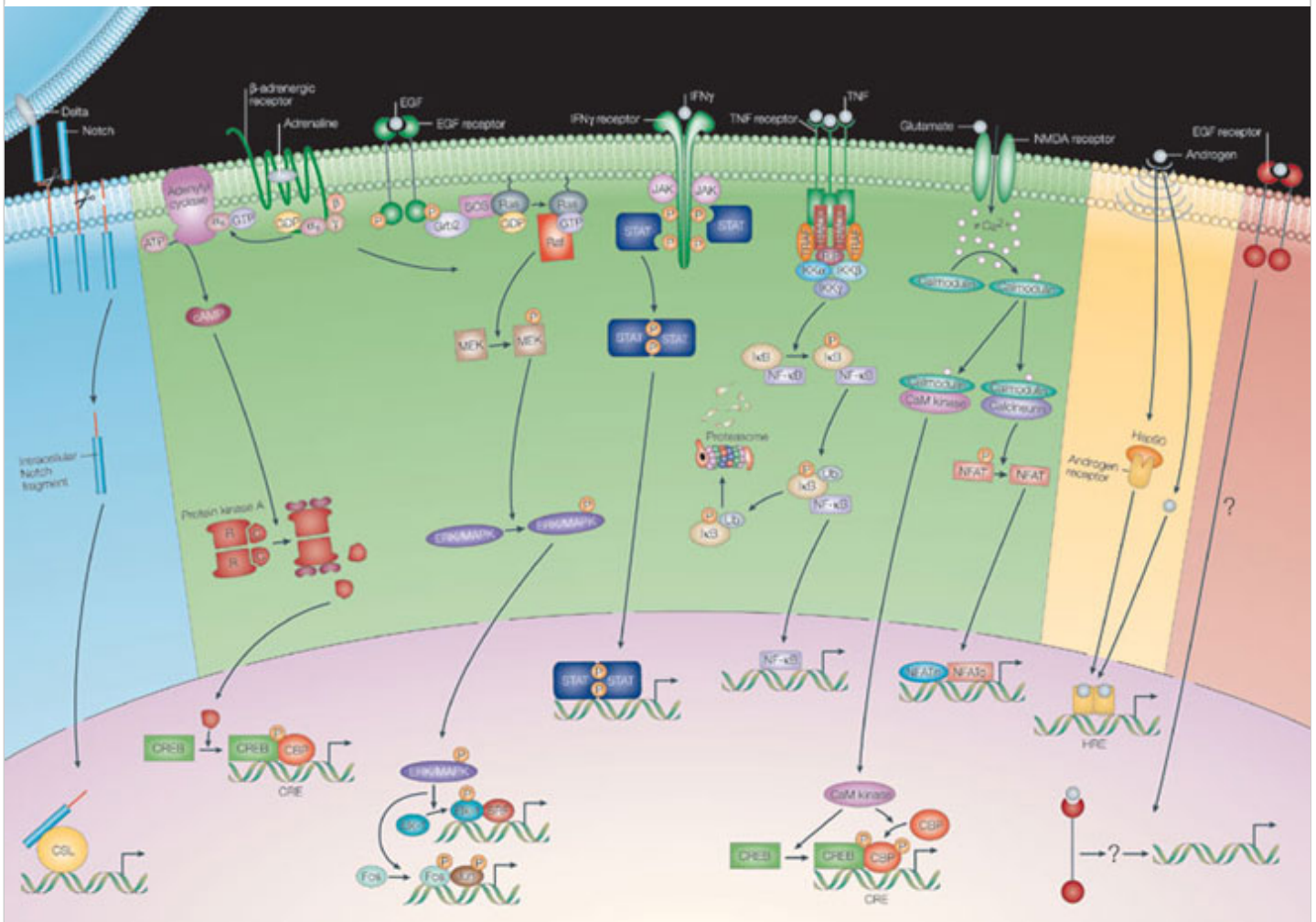


Signalling from the membrane to the nucleus

How do signals received at the cell membrane reach the nucleus? Below we provide an intentionally simplified overview of different strategies that might be used by mammalian cells to transduce signals directly from the cell surface to the nucleus. In distilling these strategies down to the basic concepts, we have necessarily selected some examples of well-established pathways (blue, green and yellow), rather than providing a comprehensive repertoire of all known signalling pathways. Indeed, this linear representation excludes the crosstalk and feedback mechanisms that we now know to be so important in signal transduction.

Whether more direct (by intramembrane cleavage, diffusion through the membrane or translocation) or through relay systems, signal transduction can affect transcriptional events in the nucleus, and representative examples of transcription factors are shown.

The four main links at the bottom of this page take you through to more details about each of the mechanistic pathways that are outlined in this poster. These include links to database entries about some of the representative proteins involved, as well as links to relevant articles in the September special focus issue of *Nature Reviews Molecular Cell Biology*.



Signalling by intramembrane cleavage

Signalling from cell-surface receptors through relay systems

Signalling by ligand passage through the membrane

Direct signalling to the nucleus



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