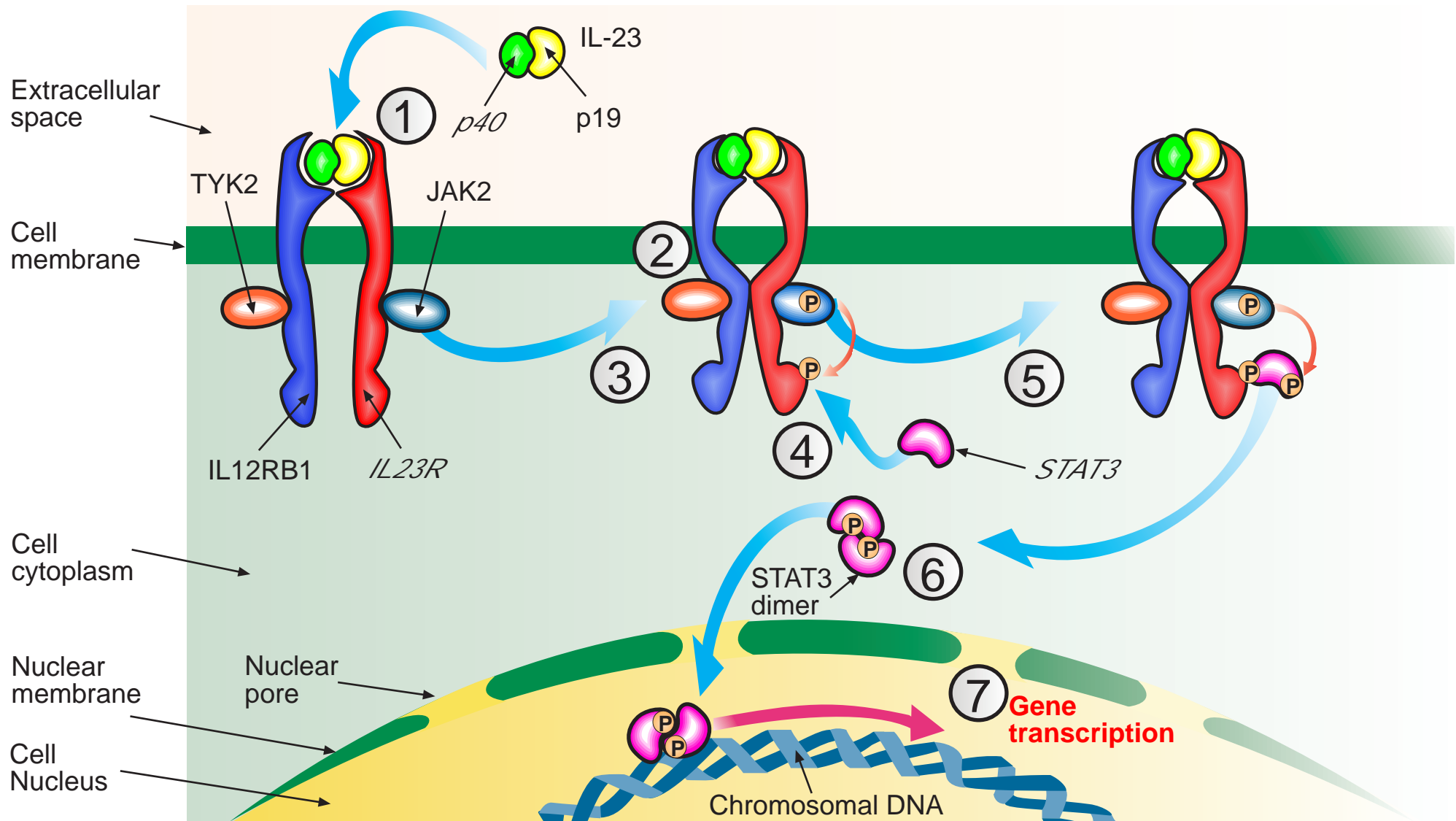


# IL-23 signal transduction



(1) Binding of IL-23 (a p40/p19 heterodimer) to it's receptor (an IL12RB1/IL23R heterodimer) causes conformational changes in the receptor cytoplasmic tails. (2) Bound JAK2 kinase is activated by autophosphorylation. (3) Activated JAK2 then phosphorylates the IL23R receptor cytoplasmic tail. (4) This recruits STAT3 monomers from the cytoplasm (also STAT1, -4 and -5). (5) Activated JAK2 phosphorylates the STAT3 monomers. (6) Activated STAT3 monomers form dimers and are recruited to the nucleus. (7) STAT3 dimers initiate gene transcription of anti-apoptosis proteins and pro-inflammatory cytokines. In **ulcerative colitis** strong gene associations with *p40*, *IL23R* and *STAT3* are known.