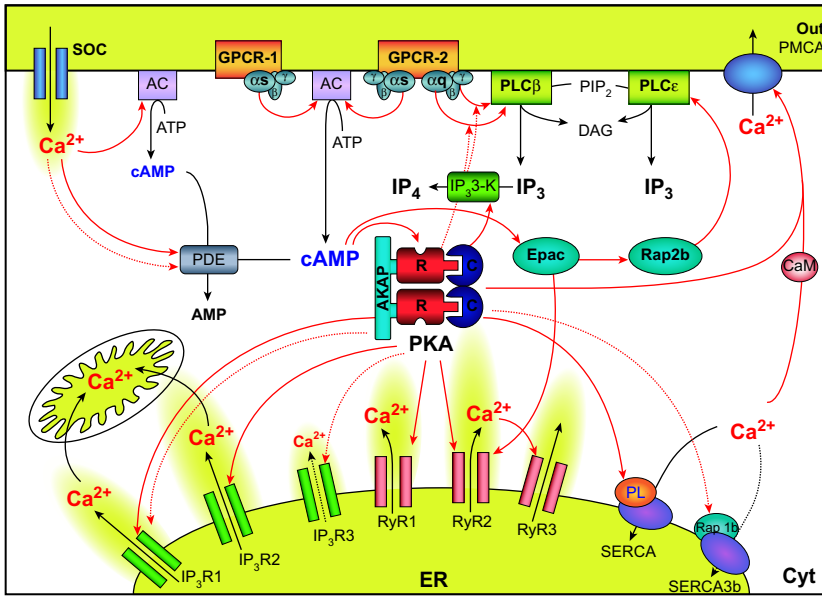

FIGURE 3.25 GPCR signaling pathways are complex and often overlapping systems. The biological impact of activation or deactivation of a GPCR depends on its physical/cellular location and downstream proteins that are impacted by changes in GPCR activity. Abbreviations: AC = adenylyl cyclase; PLC = phospholipase C; SOC = store-operated Ca^{2+} channel; $IP_3$3-K = $InsP_3$ 3-kinase; PDE = phosphodiesterases; R = regulatory of PKA; C = catalytic subunit of PKA; AKAP = A-kinase anchoring protein. *Source: Reprinted from Bruce, J. I. E.; Straub, S, V.; Yule, D. I. Crosstalk between cAMP and Ca2+ signaling in non-excitable cells. Cell Calcium, 34 (6), 431–444, copyright 2003 with permission from Elsevier.*

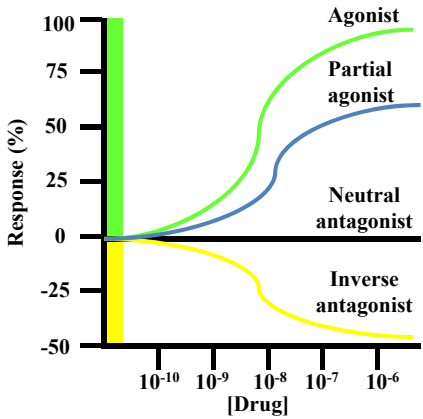

FIGURE 3.26 Full agonists (green) induce GPCR signaling equal to that of the endogenous ligand, while partial agonists (blue) activate GPCR signaling to a lesser extent. Neutral antagonists (black) do not induce GPCR activity, but will block agonist activity. Inverse agonists suppress basal activity of a constitutively active GPCR.