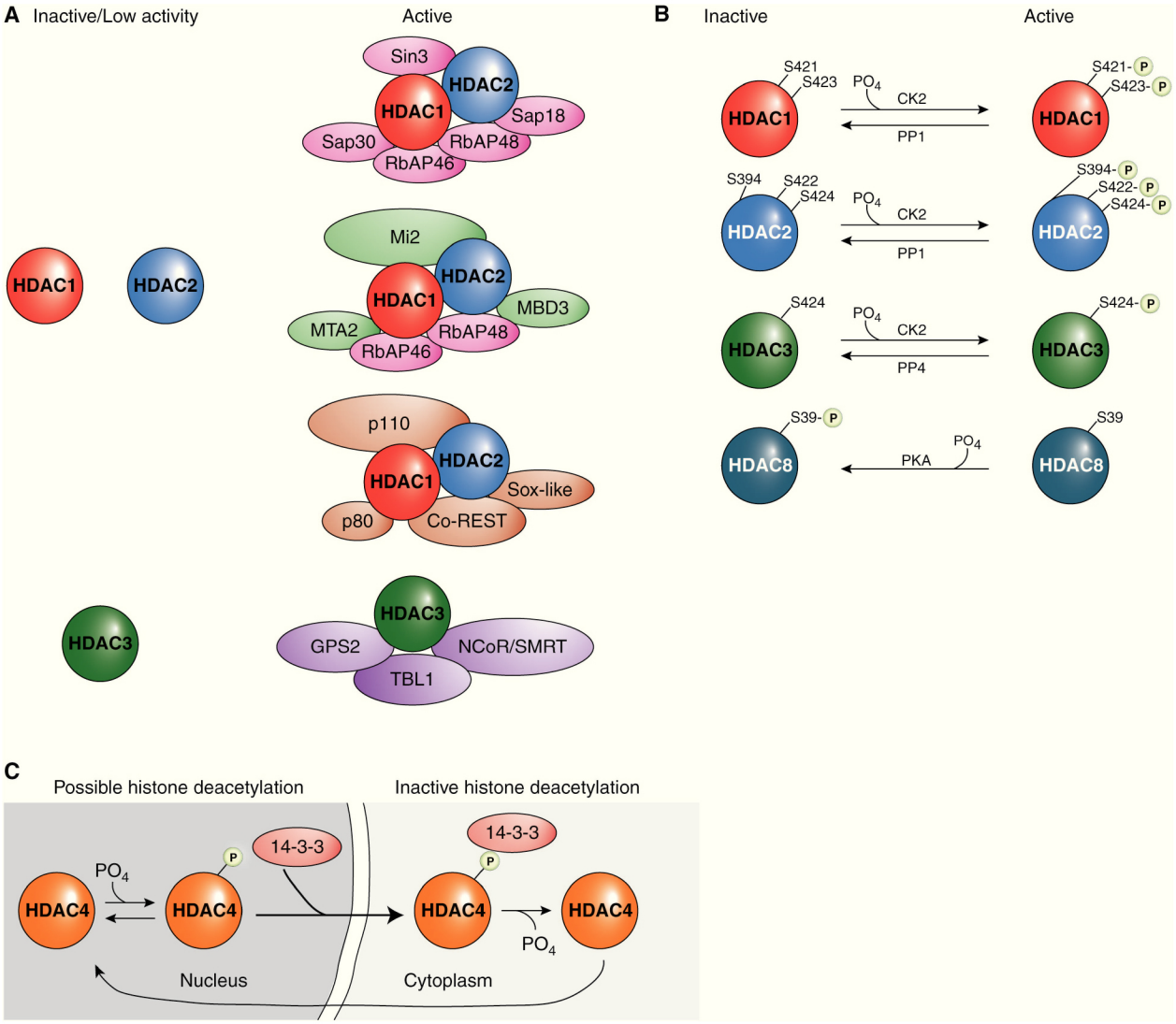

Figure 6. Examples of HDAC regulation. (*A*) Class I HDACs are commonly regulated by protein complex formations. HDAC1, HDAC2, and HDAC3 possess low enzymatic activities when in isolation, and their activities increase significantly when present in holoenzyme complexes. (*B*) The activities of Class I HDACs are modulated by phosphorylation and dephosphorylation. In general, phosphorylation activates HDAC1, HDAC2, and HDAC3, although it represses HDAC8 activities. (*C*) Phosphorylation of a Class II HDAC, HDAC4, promotes its interaction with the 14-3-3 protein and, subsequently, changes its localization. Multiple residues (S246, S467, and S632 on HDAC4, and corresponding conserved sites on HDAC5, HDAC7, and HDAC9) confer the HDAC–14-3-3 interactions.