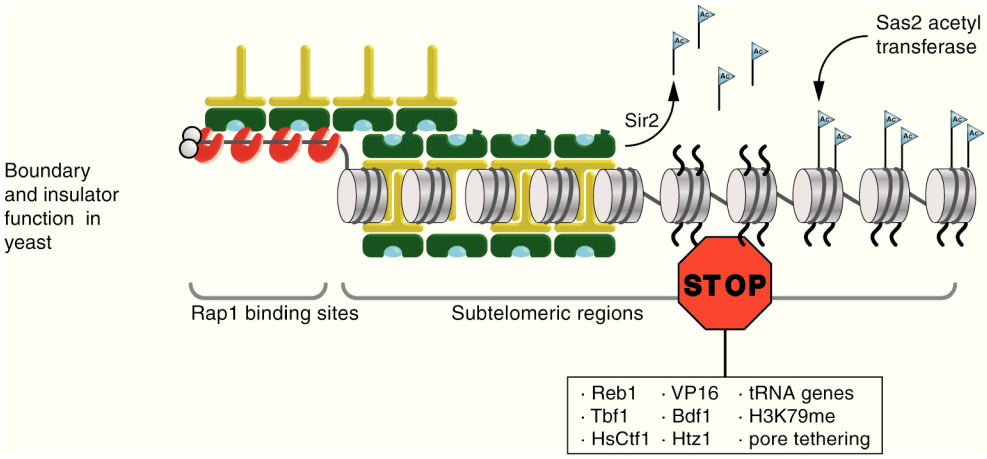

Figure 7. Heterochromatin boundary function in budding yeast. Spreading of heterochromatin through deacetylation of histone H4K16 by Sir2 is limited by the competing activity of Sas2 histone acetyltransferase, which acetylates H4K16 in adjacent euchromatin, thus preventing Sir3 binding. Methylation of K79 in histone H3 in adjacent euchromatin also affects the spreading of heterochromatin. In addition, factors such as Reb1, Tbf1, and mammalian or viral factors Ctf1 or VP16; nuclear pore tethering; and the presence of tRNA genes may also mediate boundary function. It is conceivable that several of these factors function through the recruitment of histone acetyltransferases, like Sas2.