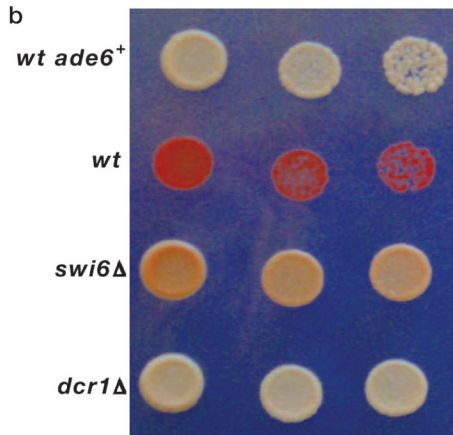


ade6⁺ gene inserted in the central domain of centromere 1



ade6⁺ gene inserted in the outer repeats of centromere 1

Figure 3. Variegation and Alleviation of Marker Gene Silencing

(a) Expression of *ade6⁺* from the central domain is variegated, resulting in red, white, and sectorial colonies. Cells expressing *ade6⁺* form white colonies, whereas when *ade6⁺* is repressed, red colonies are formed. (b) *ade6⁺* inserted in the outer repeats is robustly silenced, resulting in uniform red colonies. This silencing requires heterochromatin proteins such as Swi6 (which binds methylated H3K9) and RNAi components such as Dcr1 (Dicer, an RNase III ribonuclease).