



Figure 5. Interaction of SU(VAR)3-9 and HP1 in Setting the Distribution Pattern of H3K9me

(a) SU(VAR)3-9 is responsible for dimethylation of H3K9 (H3K9me2); loss of enzyme results in loss of this modification in the pericentromeric heterochromatin, as shown by loss of antibody staining of the polytene chromosomes (compare *middle panel* with *top panel*). Loss of HP1 results in a loss of targeting of SU(VAR)3-9; high levels of H3K9me2 are now seen throughout the chromosome arms (*bottom panel*). (b) HP1 interacts with H3K9me2 through its chromo-domain, and with SU(VAR)3-9 through its chromoshadow domain. By recognizing both the histone modification and the enzyme responsible for that modification, HP1 provides a mechanism for heterochromatin spreading and epigenetic inheritance.