



**Figure 6.** PRC1 at paused promoters and during cell division. (A) The PRC1 complex may repress target genes by stalling the elongation of RNA Pol II. This may be achieved by ubiquitination of histone H2A through the subunit SCE/dRING, compacting promoter proximal chromatin, or direct physical interaction with the transcriptional machinery (including the short RNAs produced by the paused RNA Pol II). (B) A possible model for how differential gene expression states can be inherited. The process of intergenic transcription places positive epigenetic marks (e.g., acetylated histone tails, histone variants) at PREs that control active genes (PRE 2). All other PREs are silenced by default (PRE 1). During DNA replication and mitosis, only the positive epigenetic signal needs to be transmitted to the daughter cells, ensuring that in the next interphase intergenic transcription is restarted at PRE 2 before default silencing is reestablished at all other PREs.