



**Figure 30.** X inactivation. X-chromosome inactivation is triggered and then stabilized by the antagonistic expression of the antisense RNA *Tsix* and *Xist*. *Xist* has been shown to act as a scaffold (e.g., for the recruitment of PRC2), which allows for subsequent establishment of a collection of chromatin changes, including a combination of histone modifications (H3K27me<sub>3</sub>, H2Aub, and H4K20me<sub>1</sub>), the binding of repressive complexes (PRC1), DNA methylation, and the presence of histone variants (macroH2A). The inactive X chromosome is visible in the nucleus of female mammalian cells as the “Barr body.”