



Figure 10. Genomic localization of histone H3 variants. The genomic localization of histone H3 variants, as determined by immunofluorescence and/or chromatin immunoprecipitation (ChIP)-sequencing, is schematically illustrated on a mitotic human chromosome. The centromere-specific variant CENP-A is deposited at centromeric chromatin by the HJURP chaperone. For the variant H3.3, there are two distinct histone–chaperone complexes: DAXX/ATRX deposits H3.3 at pericentric heterochromatin and telomeres, whereas HIRA regulates the incorporation at transcribed and also at bivalent genes. It is important to note that the deposition of these histone variants is replication independent. In contrast, the incorporation of canonical histone H3 (H3.1 and H3.2) is restricted to S phase.