# Polycomb Repressive Complex 2 (PRC2) Is recruited to chromatin

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# Introduction

Reactome is open-source, open access, manually curated and peer-reviewed pathway database. Pathway annotations are authored by expert biologists, in collaboration with Reactome editorial staff and cross-referenced to many bioinformatics databases. A system of evidence tracking ensures that all assertions are backed up by the primary literature. Reactome is used by clinicians, geneticists, genomics researchers, and molecular biologists to interpret the results of high-throughput experimental studies, by bioinformaticians seeking to develop novel algorithms for mining knowledge from genomic studies, and by systems biologists building predictive models of normal and disease variant pathways.

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## Literature references

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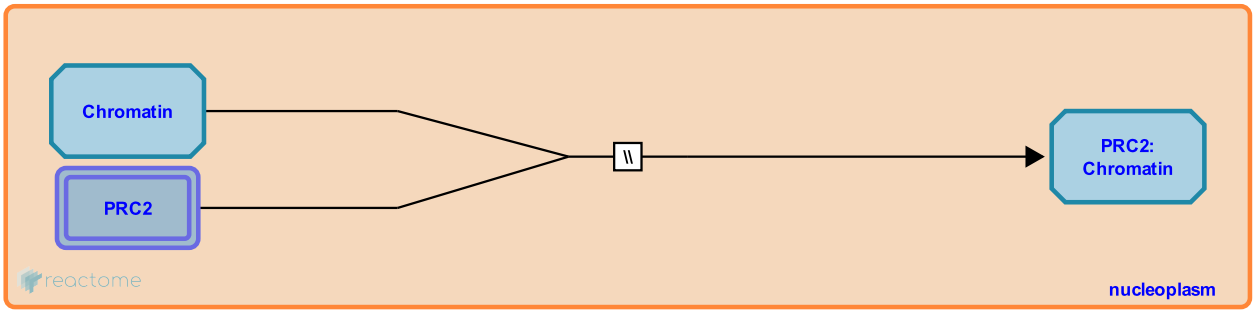
## Polycomb Repressive Complex 2 (PRC2) Is recruited to chromatin ↗

**Stable identifier:** R-HSA-212252

**Type:** omitted

**Compartments:** nucleoplasm




The core of the Polycomb Repressor Complex 2 (PRC2) contains EZH2, EED, SUV12, RpAp46, and RpAp48 (Kuzzmichev et al. 2002, Cao et al. 2002). PRC2 complexes at different sites in the genome contain the core subunits plus different accessory subunits. In Drosophila PRC2 is recruited to chromatin by specific DNA sequences. In vertebrates PRC2 appears to be recruited to chromatin through several mechanisms: some (about 20%) of noncoding RNAs tethered to the locus of origin recruit PRC2 via the RNA-binding activity of EZH2 (Zhao et al. 2008, Khalil et al. 2009), GC-rich sequence elements in DNA (Mendenhall et al. 2010) and poly(ADP-ribosyl) polymerase at sites of DNA damage (Chou et al. 2010) can also recruit polycomb components, The DNA-binding proteins JARID2, AEBP2, and YY1 recruit PRC2 (Pasini et al. 2010, Li et al. 2010, reviewed in Kim and Kim 2012). The EED subunit of PRC2 can bind existing trimethylated lysine-27 on histone H3 of PRC2 which may provide a mechanism for propagation of trimethylated lysine-27 during DNA replication (Xu et al. 2010).

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## Editions

| | | |
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