

## Recombinant PRC2 complex

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**Catalog No:** 31387, 31887

**Expressed In:** Baculovirus

**Quantity:** 20, 1000 µg

**Concentration:** 1.4 µg/µl

**Source:** Human

**Buffer Contents:** Recombinant PRC2 Complex expressed in Sf9 cells at a concentration of 1.4 µg/µl in 25 mM HEPES pH 7.5, 300 mM NaCl, 5% Glycerol, 0.04% Triton X-100, 0.2 mM TCEP, 0.2 mg/ml 3x FLAG peptide.

**Background:** PRC2 (Polycomb Repressive Complex 2) is one of the two classes Polycomb-group, or PcG proteins (the other being PRC1) that are important epigenetic determinants of stem cell identity. They play an important role in long-term epigenetic silencing of genes during cell fate determination and differentiation. PRC2 functions as a repressor of chromatin. PRC2 is required to target recruitment to specific DNA sequences (termed Polycomb Response Elements or PREs) of genomic regions to be silenced. Once associated with chromatin, the PRC2 subunit EZH2 has histone methyltransferase activity that catalyzes the trimethylation of histone H3 at lysine 27. H3K27me3 is well established as a hallmark of regions of repressed chromatin. Trimethylation of lysine 27 leads to the recruitment of PRC1 through the binding of H3K27me3 by chromodomain-containing proteins in PRC1. PRC1 is responsible for long-term gene silencing after cellular differentiation.

**Protein Details:** Recombinant PRC2 Complex that includes full length EZH2, SUZ12, EED and RbAp46/48 (accession numbers NP\_001190176.1, NP\_056170, NP\_003788.2, NP\_002884.1, and NP\_005601.1, respectively) was expressed in Sf9 and contains an N-terminal FLAG tag at the N-terminus of EZH2. The molecular weights of expressed EZH2, SUZ12, EED and RbAp46/48 are 87 kDa, 83 kDa, 50.2 kDa, 47.8 kDa and 47.7 kDa, respectively. The recombinant protein is >95% pure by SDS-PAGE.

**Application Notes:** PRC2 Complex is suitable for use in the study of enzyme kinetics, inhibitor screening and selectivity profiling.

**Catalytic Ability:** 17 turnover / enzyme molecule

**HMT Assay Conditions:** 3.3 µM H3K27me0 peptide was incubated with different concentration of PRC2 Complex in reaction buffer including 50 mM TrisCl, pH 8.6, 0.02% Triton X-100, 2 mM MgCl<sub>2</sub>, 1 mM TCEP, 100 µM SAM for 3 hours at room temperature. Activity was detected by HTRF and MALDI-TOF.

### References:

This product was used in the following publications:

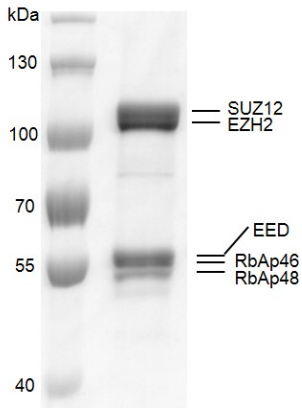
*Genome Res.* (2016). 26(7):896-907. PMID: 27197219.

*Sci. Rep.* (2017). 7(1):894. PMID: 28420874.

**Storage and Guarantee:** Recombinant proteins in solution are temperature sensitive and must be stored at -80°C to prevent degradation. Avoid repeated freeze/thaw cycles and keep on ice when not in storage. This product is guaranteed for 6 months from date of receipt.

This product is for research use only and is not for use in diagnostic procedures.

### PRC2 Complex

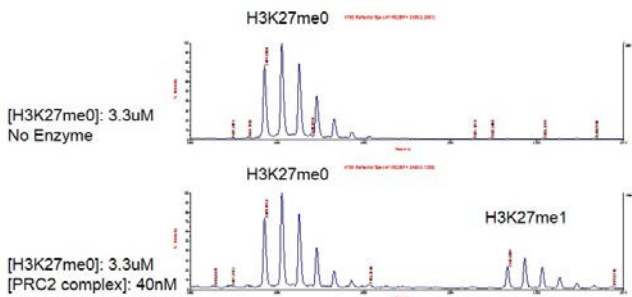


### Recombinant PRC2 Complex gel.

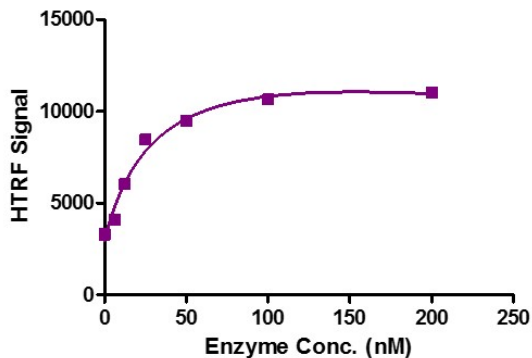
PRC2 Complex was run on an 8% SDS-PAGE gel and stained with Coomassie blue.

### Recombinant PRC2 Complex activity assay.

3.3  $\mu$ M H3K27me0 peptide was incubated with 40 nM PRC2 Complex in reaction buffer including 50 mM TrisCl, pH 8.6, 0.02% Triton X-100, 2 mM MgCl<sub>2</sub>, 1 mM TCEP, 100  $\mu$ M SAM for 3 hours at room temperature.



### PRC2 Complex Titration



### HTRF Assay for Recombinant PRC2 complex activity

1  $\mu$ M H3K27me0 (a.a. 16-44) peptide was incubated with different concentrations of PRC2 complex in reaction buffer for 3 hours at room temperature. Methylated peptide (H3K27me1) was measured using H3K27me1-specific antibody.