

Polycomb Group Antibody Sampler Kit



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1 Kit (6 x 20 microliters)

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For Research Use Only. Not for Use in Diagnostic Procedures.

Product Includes	Product #	Quantity	Mol. Wt	Isotype/Source
SUZ12 (D39F6) XP [®] Rabbit mAb	3737	20 µl	83 kDa	Rabbit IgG
Ezh2 (D2C9) XP [®] Rabbit mAb	5246	20 µl	98 kDa	Rabbit IgG
Ring1A (D2P4D) Rabbit mAb	13069	20 µl	54 kDa	Rabbit IgG
RING1B (D22F2) XP [®] Rabbit mAb	5694	20 µl	41 kDa	Rabbit IgG
Bmi1 (D20B7) XP [®] Rabbit mAb	6964	20 µl	41, 43 kDa	Rabbit IgG
Tri-Methyl-Histone H3 (Lys27) (C36B11) Rabbit mAb	9733	20 µl	17 kDa	Rabbit IgG
Anti-rabbit IgG, HRP-linked Antibody	7074	100 µl		Goat

Please visit cellsignal.com for individual component applications, species cross-reactivity, dilutions, protocols, and additional product information.

Description

The Polycomb Group Antibody Sampler Kit provides an economical means of evaluating total levels of Polycomb Group Proteins. The kit contains enough primary and secondary antibodies to perform two western mini-blot experiments.

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

Background

The polycomb group (PcG) proteins contribute to the maintenance of cell identity, stem cell self-renewal, cell-cycle regulation, and oncogenesis by maintaining the silenced state of genes that promote cell lineage specification, cell death, and cell-cycle arrest (1-4). PcG proteins exist in two complexes that cooperate to maintain long-term gene silencing through epigenetic chromatin modifications. The first complex, Eed-Ezh2, is recruited to genes by DNA-binding transcription factors and methylates histone H3 on Lys27. This histone methyltransferase activity requires the Ezh2, Eed, and Suz12 subunits of the complex (5). Methylation of Lys27 facilitates the recruitment of the second complex, PRC1, which ubiquitinates histone H2A on Lys119 (6). PRC1 is composed of Bmi1 and RING1A (also RING1 or RNF1), both of which act to enhance the E3 ubiquitin ligase activity of an additional catalytic subunit RING1B (also RING2 or RNF2) (7). PcG proteins play an important role in the regulation of cell proliferation and senescence through repression of the p16 INK4A and p19 ARF genes and are required for maintenance of adult hematopoietic and neural stem cells, as well as embryonic stem cells (3,4,8-10).

Background References

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5. Cao, R. and Zhang, Y. (2004) *Mol Cell* 15, 57-67.
6. Wang, H. et al. (2004) *Nature* 431, 873-8.
7. Cao, R. et al. (2005) *Mol Cell* 20, 845-54.
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9. Jacobs, J.J. et al. (1999) *Nature* 397, 164-8.
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