

## HP1 $\alpha$ , $\beta$ , $\gamma$ polyclonal antibody

**Other names:** CBX5, 1, 3

**Cat. No.** C15410071 (pAb-071-050)

**Type:** Polyclonal ChIP-grade

**Source:** Rabbit

**Lot #:** 001

**Size:** 50  $\mu$ g/ 25  $\mu$ l

**Concentration:** 2  $\mu$ g/ $\mu$ l

**Specificity:** Human, mouse: positive

Other species: not tested

**Purity:** Protein G purified polyclonal antibody in PBS containing 0.05% azide and 0.05% ProClin 300.

**Storage:** Store at -20°C; for long storage, store at -80°C. Avoid multiple freeze-thaw cycles.

**Precautions:** This product is for research use only. Not for use in diagnostic or therapeutic procedures.

### Description:

Polyclonal antibody raised in rabbit against human HP1  $\beta$  (Heterochromatin protein 1 homolog beta), using the full length recombinant GST tagged protein. The antibody also recognizes the  $\alpha$  and  $\gamma$  isoforms.

### Applications

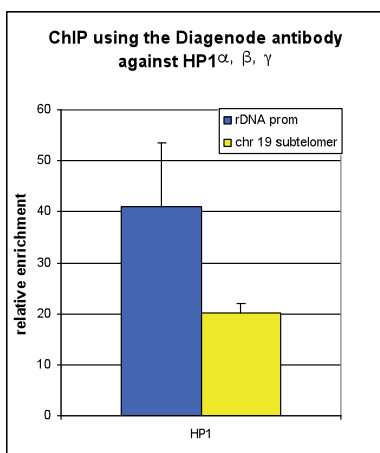
	Suggested dilution	Results
ChIP *	4 $\mu$ g/ChIP	Fig 1
Western blotting	1:1,000	Fig 2
Immunofluorescence	1:500	Fig 3

\* Please note that the optimal antibody amount per IP should be determined by the end-user. We recommend testing 1-5  $\mu$ g per IP.

### Target description

HP1 alpha, beta and gamma (UniProt/Swiss-Prot entry P45973, P83916 and Q13185) are components of heterochromatin. They recognize and bind histone H3 tails methylated at 'Lys-9', leading to epigenetic repression of transcription. HP1 alpha, beta and gamma also interact with lamin B receptor (LBR), thereby contributing to the association of heterochromatin with the inner nuclear membrane.

## Results

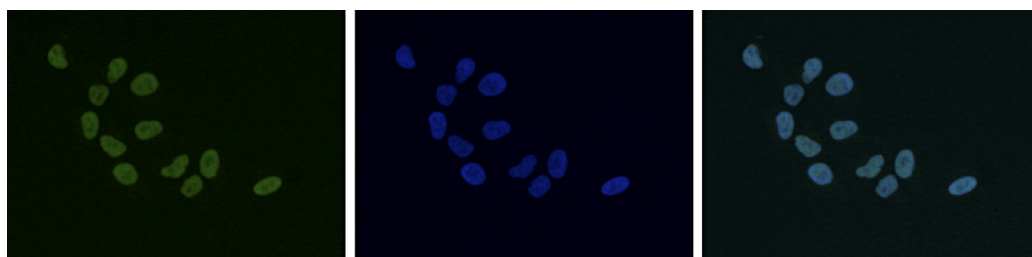
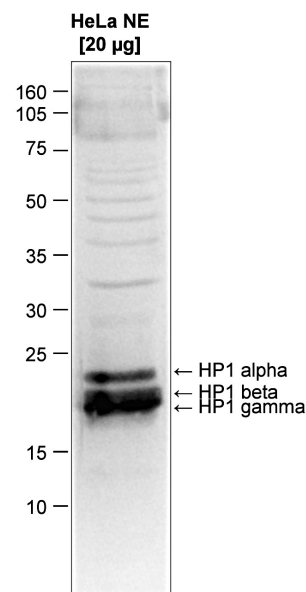


**Figure 1. ChIP results obtained with the Diagenode antibody directed against HP1 $\alpha$ ,  $\beta$  and  $\gamma$**

ChIP assays were performed using NIH3T3 cells and 4  $\mu$ g of the Diagenode antibody directed against HP1 $\alpha$ ,  $\beta$  and  $\gamma$  (Cat. No. C15410071). QPCR was performed on the IP'd DNA with optimized primer sets for the rDNA promoter and for a subtelomeric sequence of chromosome 19. Figure 1 shows the relative enrichment as compared to a no antibody negative control ChIP.

**Figure 2. Western blot analysis using the Diagenode antibody directed against HP1 $\alpha$ ,  $\beta$  and  $\gamma$**

Western blot was performed on nuclear extracts from HeLa cells (20  $\mu$ g) with the Diagenode antibody against human HP1 $\alpha$ ,  $\beta$  and  $\gamma$  (Cat. No. C15410071) diluted 1:1,000 in TBS-Tween containing 5% skimmed milk (Figure 1). The molecular weight marker (in kDa) is shown on the left; the expected location of HP1 $\alpha$ , HP1 $\beta$  and HP1 $\gamma$  is indicated on the right.



**Figure 3. Immunofluorescence using the Diagenode antibody directed against HP1 $\alpha$ ,  $\beta$  and  $\gamma$**

HeLa cells were stained with the Diagenode antibody against HP1 $\alpha$ ,  $\beta$  and  $\gamma$  (Cat. No. C15410071) and with DAPI. Cells were fixed with 4% formaldehyde for 10' and blocked with PBS/TX-100 containing 5% normal goat serum and 1% BSA. The cells were immunofluorescently labelled with the HP1 $\alpha$ ,  $\beta$  and  $\gamma$  antibody (left) diluted 1:500 in blocking solution followed by an anti-rabbit antibody conjugated to Alexa488. The middle panel shows staining of the nuclei with DAPI. A merge of the two stainings is shown on the right.