Histone H2Av antibody (pAb)

Catalog Nos: 39715, 39716
RRID: AB_2793318
Isotype: IgG
Application(s): ChIP, ChIP-Seq, WB
Reactivity: Drosophila

Volumes: 100 µl, 10 µl
Purification: Affinity Purified
Host: Rabbit
Molecular Weight: 15 kDa

Background: The nucleosome is the smallest subunit of chromatin and consists of 147 base pairs of DNA wrapped around an octamer of core histone proteins (two each of Histone H2A, Histone H2B, Histone H3 and Histone H4). Histone H2A.Z (H2AZ, H2AFZ) is a histone H2A variant, a protein similar to canonical H2A but with different molecular identity and unique functions. H2A.Z is highly conserved during evolution. It plays an important role in basic cellular mechanisms such as gene activation, chromosome segregation, heterochromatic silencing and progression through the cell cycle.In *Drosophila*, the H2A variant corresponding to H2AZ is H2Av. H2Av is an essential protein in *Drosophila* and has been implicated in both activation and repression of transcription. H2Av is localized to centromeric heterochromatin in *Drosophila* and flies lacking H2Av have reduced levels of heterochromatin components at the centromeres. However, H2Av nucleosome distribution throughout the rest of the *Drosophila* genome correlates with genes that have an open and uniform chromatin architecture at promoter regions.

Immunogen: This Histone H2Av antibody was raised against a peptide in the C-terminus of the Drosophila melanogaster histone variant H2Av.

Buffer: Purified IgG in PBS with 30% glycerol and 0.035% sodium azide. Sodium azide is highly toxic.

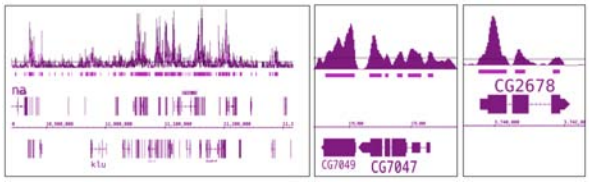
Application Notes:
Validated Applications:
ChIP: 4 - 6 µl per ChIP
ChIP-Seq: 4 - 6 µl each
WB: 1:500 dilution

Published Applications:
ChIP
ChIP-Seq
WB

Storage and Guarantee: Some products may be shipped at room temperature. This will not affect their stability or performance. Avoid repeated freeze/thaw cycles by aliquoting items into single-use fractions for storage at -20°C for up to 2 years. Keep all reagents on ice when not in storage. This product is guaranteed for 12 months from date of receipt.

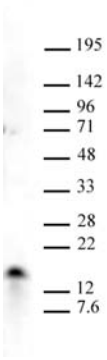
This product is for research use only and is not for use in diagnostic procedures.

Histone H2Av antibody tested by ChIP-Seq.



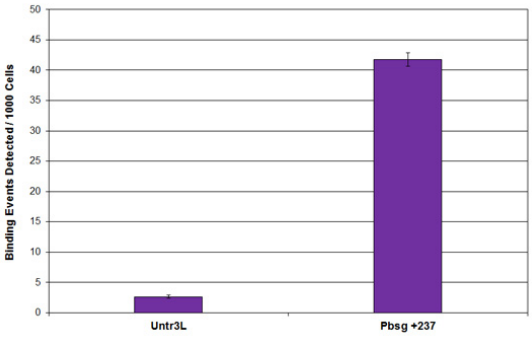
ChIP was performed using the ChIP-IT® High Sensitivity Kit (Cat. No. 53040) with chromatin from 10 million Drosophila cells and 4 µg of H2Av antibody. ChIP DNA was sequenced on the Illumina HiSeq and 8 million sequence tags were mapped to identify H2Av binding patterns. The image on the left shows H2Av binding within a 0.5 million bp region on Drosophila chromosome 3L. The middle and right images show binding at 3 representative genes. A common noted feature is signal depletion within introns as illustrated at Gene CG7047 and CG2678. Another noted characteristic is that the highest signal tends to occur at promoters with diminishing signal related to proximity to the 3´ end of genes.

Histone H2Av antibody tested by Western blot.



Detection of Histone H2Av by Western blot analysis. Whole cell extract from Drosophila third instar larvae blotted with Histone H2Av antibody at a dilution of 1:500.

Histone H2Av antibody (pAb) tested by ChIP.



Chromatin immunoprecipitation (ChIP) was performed using the ChIP-IT® High Sensitivity Kit (Cat. No. 53040) with 4 µg of Drosophila cell chromatin and 1µl of Histone H2Av antibody. ChIP DNA was used in qPCR with the negative control primer pairs or gene-specific primer pairs as indicated. Data are presented as Binding Events Detected per 1000 Cells using Active Motif's Epigenetic Services normalization scheme which accounts for primer efficiency and the amount of chromatin used in the ChIP reaction.