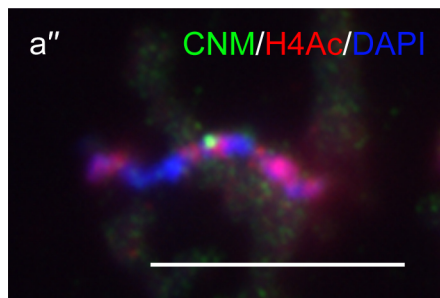
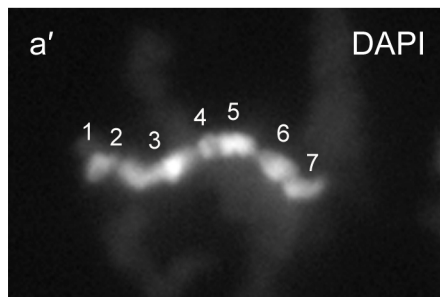
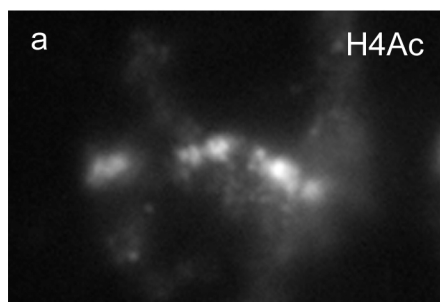


Electronic Supplementary Material

Mapping epigenetic modifications on chicken lampbrush chromosomes

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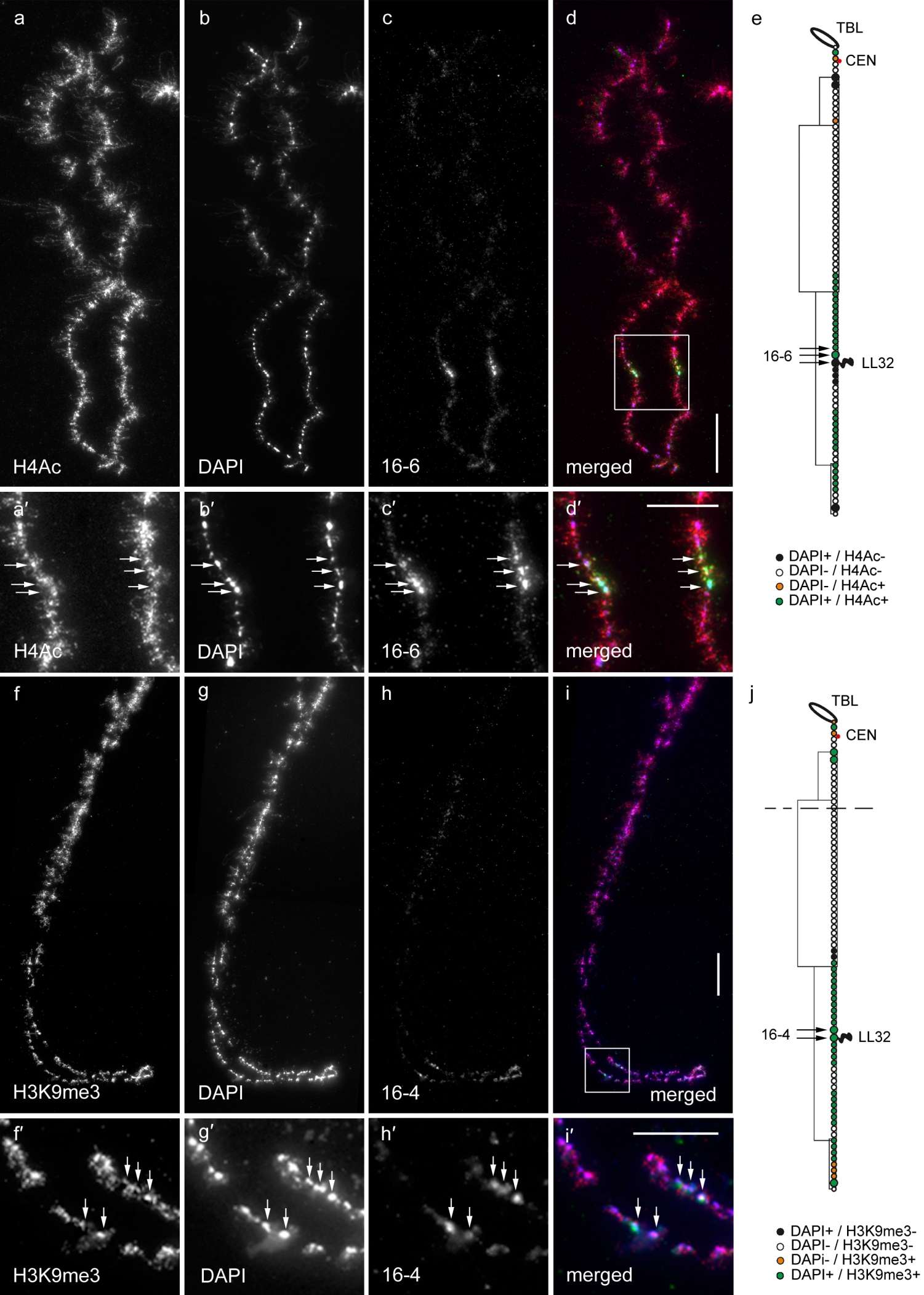
¹Saint Petersburg State University, Saint-Petersburg, Russia



Supplementary Figure 1. Positioning of chromomere 4 on GGAW after immunodetection of H4Ac.

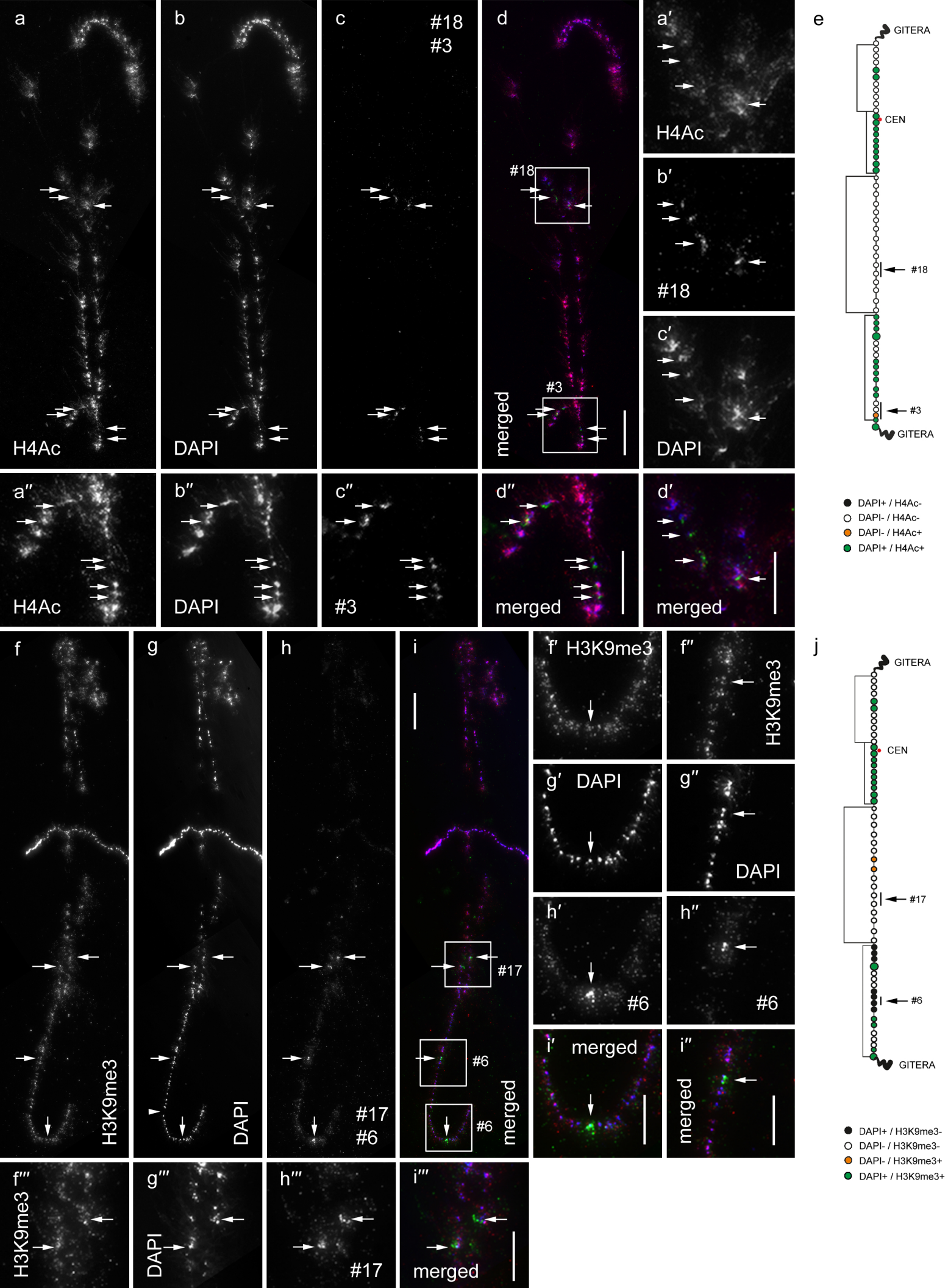
FISH with oligonucleotide probe to CNM repeat after immunostaining of GGAW with antibodies against H4Ac. **a** – H4Ac, **a'** – DAPI, **a''** – FISH with oligonucleotide probe to CNM repeat (green) merged with H4Ac (red) and DAPI (blue). Numbers (**1-7**) indicate individual chromomeres of GGAW from free terminus to chiasma with the chromosome Z.

Scale bar – 10 μm .



Supplementary Figure 2. FISH with the DNA-probes to the chromomere bearing LL32 on GGA3 q-arm after immunodetection of H4Ac and H3K9me3.

a – immunodetection of H4Ac on GGA3, **f** – immunodetection of H3K9me3 on the fragment of GGA3. **b, g** – DAPI staining. **c, h** – FISH with the DNA probes #16-6 and #16-4 to the chromomere bearing LL32 correspondingly. **d, i** – merged **a-c** and **f-h** images correspondingly (immunostaining – red, DAPI – blue, FISH signals – green). **a'-d', f'-i'** – enlarged areas of panels **a-d** and **f-i**, framed on **d** and **i**. Arrows indicate FISH signals. Scale bars on panels **a-d, f-i** – 20 μm , on panels **a'-d', f'-i'** – 10 μm . **e, j** – maps of H4Ac and H3K9me3 distribution on GGA3 correspondingly. DAPI-positive chromomeres – white circles, DAPI-negative chromomeres – black circles, DAPI-positive chromomeres enriched with H4Ac or H3K9me3 – green circles, DAPI-negative chromomeres enriched with H4Ac or H3K9me3 – orange circles. Arrows indicate chromomeres hybridized with the corresponding DNA probes. Dashed line (**j**) indicates border of the GGA3 fragment (**f-i**). CEN – centromere position, TBL – telomere bow-like loops. LL32 – lumpy loop 32.



Supplementary Figure 3. FISH with the DNA-probes to individual chromomeres of GGA4 after immunodetection of H4Ac or H3K9me3. **a** – immunodetection of H4Ac on GGA4. **f** – immunodetection of H3K9me3 on GGA4. **b, g** – DAPI staining. **c, h** – FISH with the DNA probes **#3+#18** and **#6+#17** to individual chromomeres of GGA4 q-arm correspondingly. **d, i** – merged **a-c** and **f-h** images correspondingly (immunostaining – red, DAPI – blue, FISH signals – green). Enlarged areas of panels **a-d** and **f-i**, framed on **d** and **i** correspondingly: **a'-d'** – DNA probe **#18**; **a''-d''** – DNA probe **#3**, **f' - i'**, **f''-i''** – DNA probe **#6**; **f'''-i'''** – DNA probe **#17**. Arrows indicate FISH signals, arrowhead (**h**) – position of chromosome termini. Scale bars on panels **a-d, f-i** – 20 μm , on panels **a'-d'', f'-i'''** – 10 μm . **e, j** – maps of H4Ac and H3K9me3 distribution on GGA4 correspondingly. DAPI-positive chromomeres – white circles, DAPI-negative chromomeres – black circles, DAPI-positive chromomeres enriched with H4Ac or H3K9me3 – green circles, DAPI-negative chromomeres enriched with H4Ac or H3K9me3 – orange circles. Arrows indicate chromomeres hybridized with the corresponding DNA probes. CEN – centromere position, GITERA – giant terminal RNP aggregates.