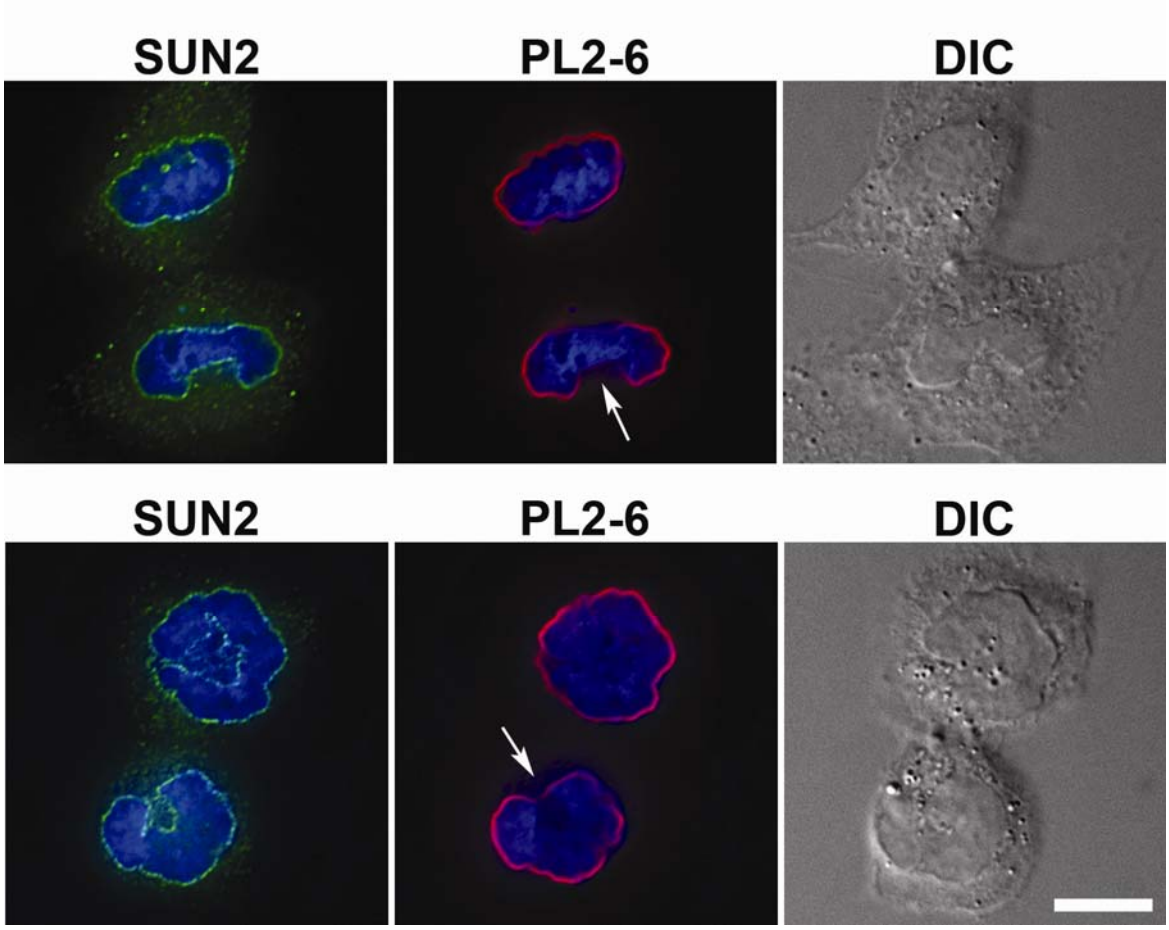
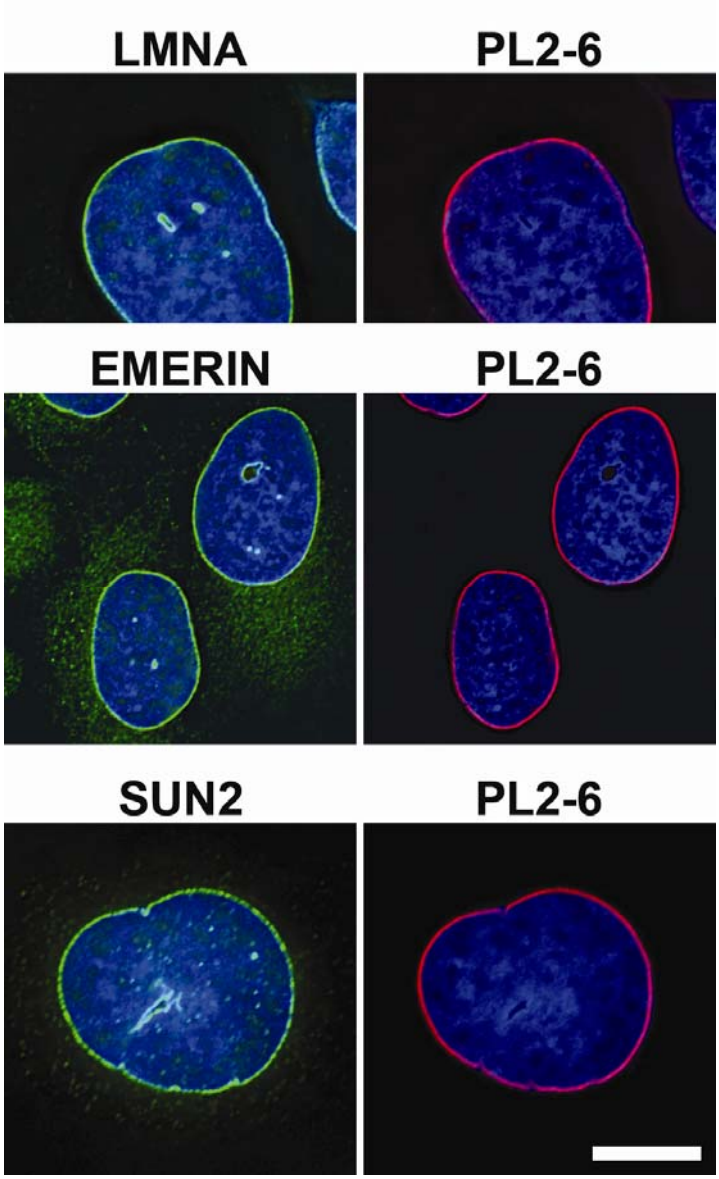
Supplementary Figure 1



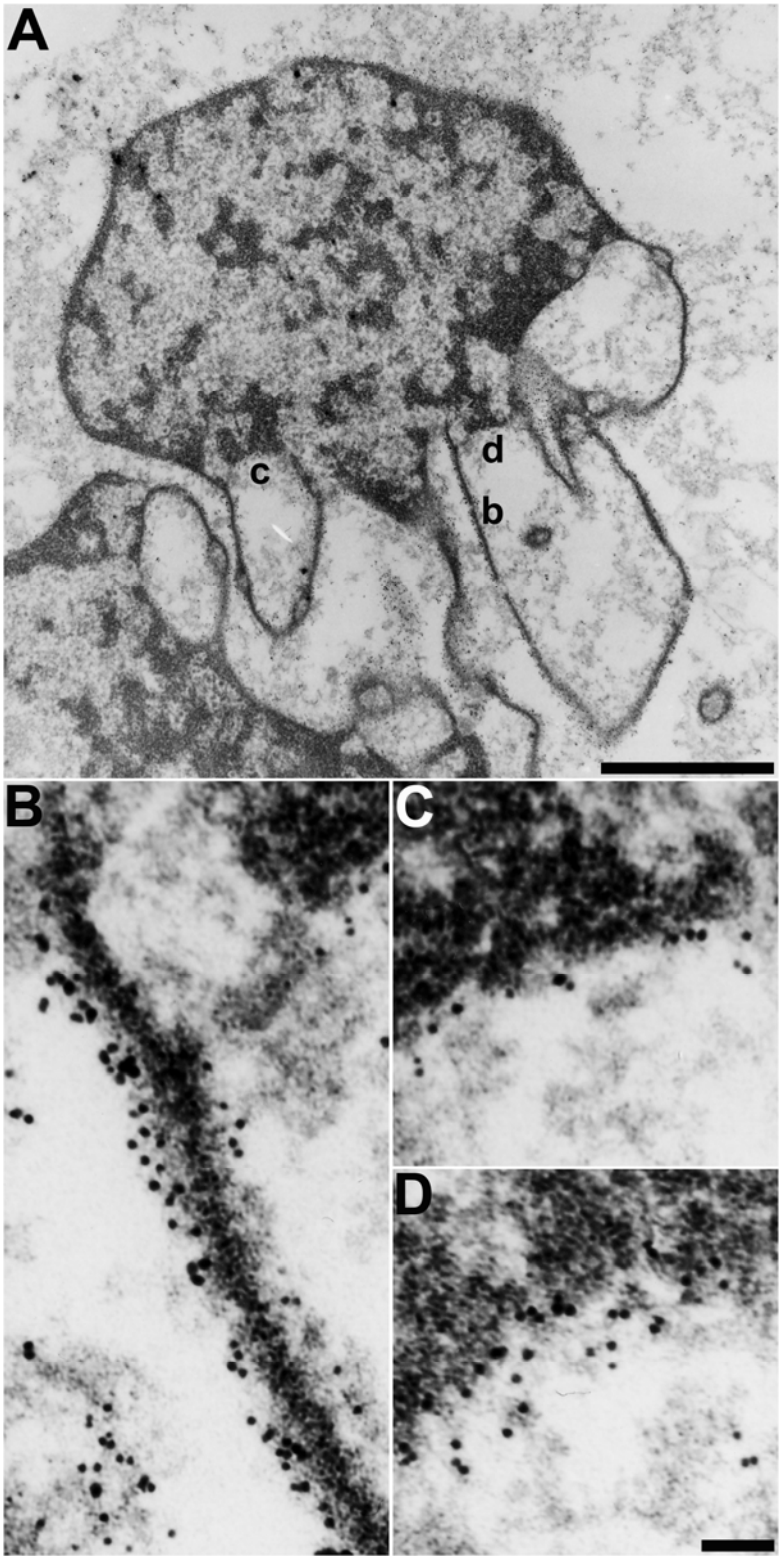
Telophase U2OS cells demonstrating the absence of epichromatin staining of mitotic chromosome "cores". Two examples of separating daughter cells are presented (appearing connected in the DIC images). Both examples are stained with anti-SUN2 and PL2-6. Arrows point to the mitotic chromosome cores. It is clear that anti-SUN2 has stained around the reforming daughter nuclei, including both the cores and periphery; but PL2-6 does not react with the core regions. Bar equals 10 μm.

Supplementary Figure 2



Interphase U2OS cells demonstrating the absence of epichromatin staining of intranuclear tubules. The left column of images pairs anti-lamin A (LMNA), emerin or SUN2 with DAPI. The right column of images pairs PL2-6 with DAPI. Intranuclear tubules are clearly stained by anti-LMNA, emerin and SUN2, but not by PL2-6. Bar equals 10 μm.

Supplementary Figure 3



Immunoelectron microscopic labeling of LBR at the NE periphery and within ELCS of RA treated HL-60/S4 cells. Panel A displays a granulocytic cell which exhibits nuclear lobulation and extensive formation of ELCS. Enlarged regions taken from panel A are as follows: panel B, taken from panel A (region "b"), presents a single ELCS; panel C and D, taken from panel A (regions "c and d"), displays segments of the nuclear surface. The NE and ELCS membranes can not be visualized because of the post-fixation detergent extraction and because the samples were not fixed with OsO4. Magnification bar values: panels A, 1 μm; panels B, C and D, 100 nm.

Supplemental Video Legends

Video 1. Late Prophase. Movie of projections through a stack of deconvolved slices of the epichromatin epitope distribution (red) in a late prophase U2OS cell (Fig. 2), rotating +/- 30^{o} around the vertical axis. This movie should be opened with a video player in the "loop" mode.

Video 2. Early Anaphase. Movie of projections through a stack of deconvolved slices of the epichromatin epitope distribution (red) in an early anaphase U2OS cell (Fig. 2), rotating +/- 30^{o} around the vertical axis. This movie should be opened with a video player in the "loop" mode.

Video 3. Late Anaphase. Movie of projections through a stack of deconvolved slices of the epichromatin epitope distribution (red) in a late anaphase U2OS cell (Fig. 2), rotating +/- 30^{o} around the vertical axis. This movie should be opened with a video player in the "loop" mode.

Video 4. Early Telophase. Movie of projections through a stack of deconvolved slices of the epichromatin epitope distribution (red) in an early telophase U2OS cell (Fig. 2), rotating +/- 30^{o} around the vertical axis. This movie should be opened with a video player in the "loop" mode.

Video 5. Late Telophase. Movie of projections through a stack of deconvolved slices of the epichromatin epitope distribution (red) in a late telophase U2OS cell (Fig. 2),

rotating +/- 30^{o} around the vertical axis. This movie should be opened with a video player in the "loop" mode.