

April 13, 2001

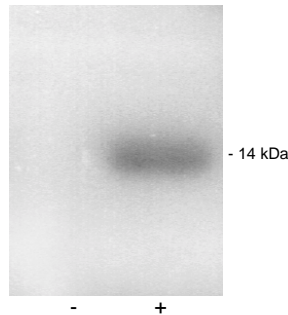
Trevigen Press Release

NEW PRODUCT

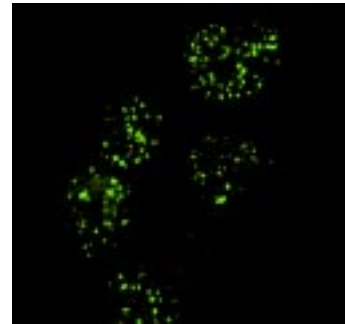
DNA Damage Research Product
Anti-Phosphorylated Histone H2AX (γ -H2AX) Antibody

Trevigen, Inc. announces the release of anti-phosphorylated histone H2AX (γ -H2AX) polyclonal antibody, unique in detecting double-strand(ds) DNA breaks. Histone H2AX is a 14 kDa ubiquitous member of the H2A histone family that contains an evolutionarily conserved SQ motif at the C-terminus in eukaryotes. Serine 139 within this motif becomes rapidly phosphorylated to yield a form known as γ -H2AX in response to ds DNA breaks and apoptosis. This phosphorylation in mammalian cells is at half maximal between 1-3 minutes after exposure to ionizing radiation with hundreds to several thousand molecules of γ -H2AX molecules present per ds DNA break. γ -H2AX is at ds DNA breaks in irradiated mammalian cells and in other species following irradiation such as *X. laevis* (frog), *D. melanogaster* (fruit fly), and *S. cerevisiae* (yeast). γ -H2AX formation has been shown to be an early chromatin modification of DNA in apoptosis. Furthermore, the pattern of γ -H2AX foci and recruitment of repair factors such as Rad 50 and 51 to sites of ds DNA breaks suggests a change in chromatin structure during ds DNA break repair. Anti-phosphorylated histone H2AX antibody has also been useful for investigational studies on meiotic and VDJ recombination.

This rabbit polyclonal antibody is suitable for immunocytochemistry, Western blotting applications, and 2-D gel analysis on eukaryotic cells. Contact Trevigen for further technical details.



Immunoblot of SDS-extracts from Jurkat cells treated with and without 120 μ M etoposide for 4 hours. Samples were electrophoresed on an 18% Tris-Glycine gel and transferred onto a PVDF membrane. γ -H2AX was detected with anti-phosphorylated Histone H2AX antibody followed by anti-rabbit conjugated to horseradish peroxidase and visualized by chemiluminescence.



Human cancer (NCI/ADR) cells were irradiated with 2 Gy to introduce ds DNA breaks. After fixation and permeabilization, cells were labeled with anti-phosphorylated histone H2AX antibody followed by an anti-rabbit fluorescein conjugate. Photo courtesy of Dr. E. Rogakou, National Cancer Institute, NIH, Bethesda, MD.

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 Trevigen, Inc. develops, manufactures, and markets research products for the detection and characterization of DNA mutations, DNA damage, and programmed cell death.