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Product datasheet for TA347131

Histone H2A.X (H2AFX) Rabbit Polyclonal Antibody

Product data:

Product Type:	Primary Antibodies
Applications:	Dot, ELISA, WB
Recommended Dilution:	ELISA (1:10,000); Dot blotting (1:10,000); Western blotting (1:1,000)
Reactivity:	Human
Host:	Rabbit
Isotype:	IgG
Clonality:	Polyclonal
Immunogen:	The immunogen for anti-H2A.XS139p antibody: the region of histone H2A.X containing the phosphorylated serine 139 (H2A.XS139p), using a KLH-conjugated synthetic peptide.
Concentration:	lot specific
Purification:	Affinity purified polyclonal antibody in PBS containing 0.05% azide and 0.05% ProClin 300.
Conjugation:	Unconjugated
Storage:	Store at -20°C as received.
Stability:	Stable for 12 months from date of receipt.
Gene Name:	H2A histone family member X
Database Link:	NP_002096 Entrez Gene 3014 Human P16104
Background:	Histones are the main constituents of the protein part of chromosomes of eukaryotic cells. They are rich in the amino acids arginine and lysine and have been greatly conserved during evolution. Histones pack the DNA into tight masses of chromatin. Two core histones of each class H2A, H2B, H3 and H4 assemble and are wrapped by 146 base pairs of DNA to form one octameric nucleosome. Histone tails undergo numerous post-translational modifications, which either directly or indirectly alter chromatin structure to facilitate transcriptional activation or repression or other nuclear processes. In addition to the genetic code, combinations of the different histone modifications reveal the so-called "histone code". Histone methylation and demethylation is dynamically regulated by respectively histone methyl transferases and histone demethylases. H2A.XS139p appears during apoptosis and is probably involved in DNA repair.

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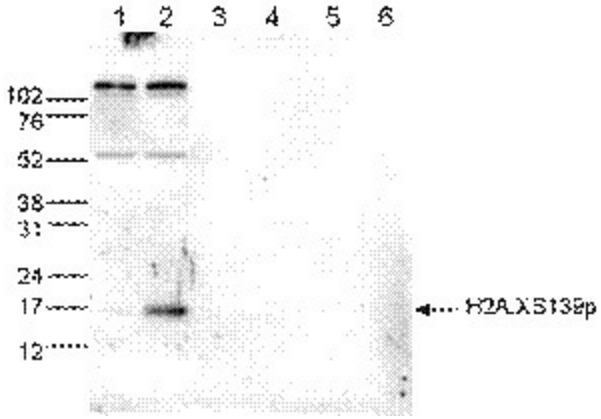
Synonyms: H2A; H2A.X; H2AX; X

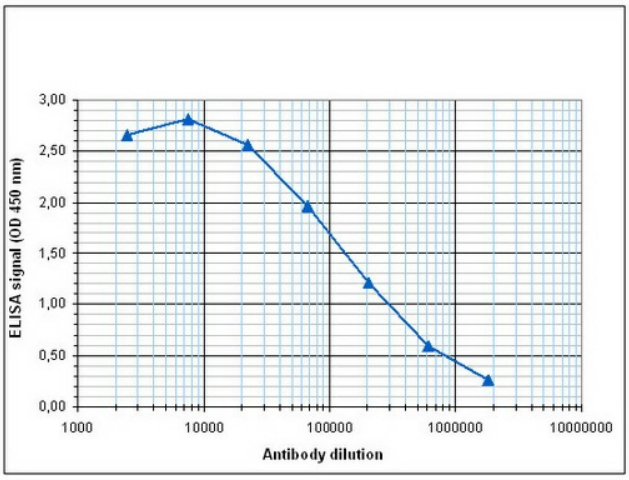
Protein Families: Druggable Genome

Protein Pathways: Systemic lupus erythematosus

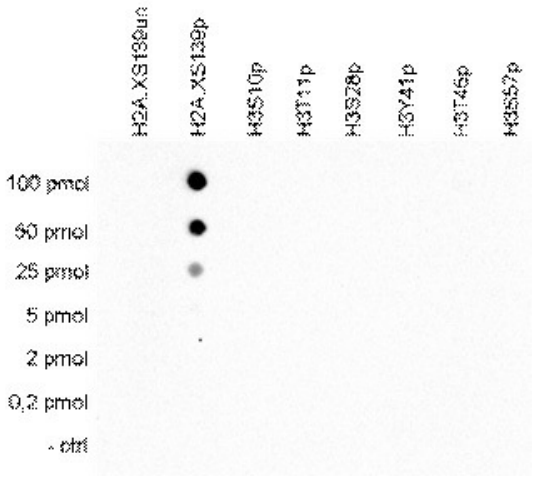
Product images:



WB was performed on histone extracts (15 ug) from untreated U2OS cells (lane 1) or from U2OS cells treated with camptothecin (lane 2), and on 1 ug of recombinant histone H2A, H2B, H3 and H4 (lane 3, 4, 5 and 6, respectively) using the antibody against H2A.XS139p. The antibody was diluted 1:1,000 in TBS-Tween containing 5% skimmed milk. The marker (in kDa) is shown on the left.



Determination of the antibody titer To determine the titer of the antibody, an ELISA was performed using a serial dilution of the antibody against H2A.XS139p in antigen coated wells. The antigen used was a peptide containing the histone modification of interest. By plotting the absorbance against the antibody dilution (Figure 1), the titer of the antibody was estimated to be 1:170,000.



A Dot Blot analysis was performed with peptides containing other histone phosphorylations and the unmodified H2A.X. One hundred to 0.2 pmol of the respective peptides were spotted on a membrane. The antibody was used at a dilution of 1:10,000. Image shows a high specificity of the antibody for the modification of interest.