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Anti-H2AX pS139 (RABBIT) Antibody

H2AX phospho S139 Antibody
Catalog # ASR5606

Specification

Anti-H2AX pS139 (RABBIT) Antibody - Product Information

Host	**Rabbit**
Conjugate	**Unconjugated**
Target Species	**Human**
Reactivity	**Human**
Clonality	**Polyclonal**
Application	**WB, E, I, LCI**
Application Note	**Anti-H2AX pS139 antibody has been tested for use in ELISA and by western blot. Specific conditions for reactivity should be optimized by the end user. Expect a band approximately 15 kDa in size corresponding to phosphorylated H2AX protein by western blotting in the appropriate stimulated tissue or cell lysate or extract.**
Physical State	**Liquid (sterile filtered)**
Buffer	**0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2**
Immunogen	**Anti-H2AX pS139 purified antibody was prepared from whole rabbit serum produced by repeated immunizations with a phosphorylated synthetic peptide corresponding to the C-terminal region containing serine 139 of human H2AX protein.**
Preservative	**0.01% (w/v) Sodium Azide**

Anti-H2AX pS139 (RABBIT) Antibody - Additional Information

Gene ID 3014

Other Names
3014

Purity
H2AX pS139 is directed against the phosphorylated form of human H2AX protein at the pS139 residue. The product was affinity purified from monospecific antiserum by immunoaffinity purification. Antiserum was first purified against the phosphorylated form of the immunizing peptide. The resultant affinity purified antibody was then cross adsorbed against the non-phosphorylated form of the immunizing peptide. Reactivity with non-phosphorylated human H2AX is minimal by ELISA and western blot. A BLAST analysis was used to suggest 100% cross reactivity with H2AX from human based on the sequence homology with the immunogen. Reactivity against homologues from other sources is not known.

Storage Condition
Store Histone H2A.X (phospho S139) antibody at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.

Precautions Note
This product is for research use only and is not intended for therapeutic or diagnostic applications.

Anti-H2AX pS139 (RABBIT) Antibody - Protein Information

Name H2AX (HGNC:4739)

Function
Variant histone H2A which replaces conventional H2A in a subset of nucleosomes. Nucleosomes wrap and compact DNA into chromatin, limiting DNA accessibility to the cellular machineries which require DNA as a template. Histones thereby play a central role in transcription regulation, DNA repair, DNA replication and chromosomal stability. DNA accessibility is regulated via a complex set of post- translational modifications of histones, also called histone code, and nucleosome remodeling. Required for checkpoint-mediated arrest of cell cycle progression in response to low doses of ionizing radiation and for efficient repair of DNA double strand breaks (DSBs) specifically when modified by C-terminal phosphorylation.

Cellular Location
Nucleus. Chromosome

Anti-H2AX pS139 (RABBIT) Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Anti-H2AX pS139 (RABBIT) Antibody - Images

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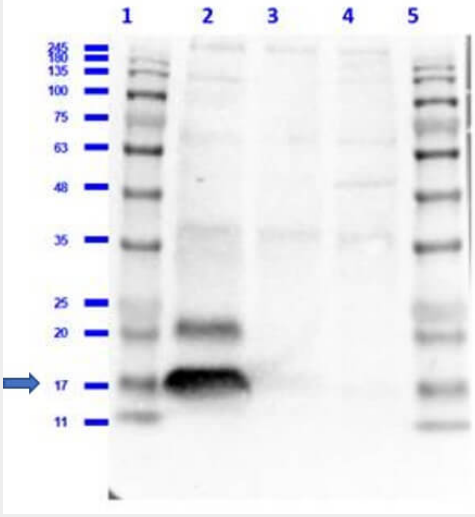

Western Blot of Rabbit Anti-H2AX pS139 Antibody. Lane 1: Opal Prestained Molecular Weight Marker (p/n MB-210-0500). Lane 2: HEK293T Whole cell Lysate (p/n W09-001-GX5) [+]. Lane 3: MCF-7 Whole cell Lysate (p/n W09-000-360) [+]. Lane 4: U-87-MG Whole cell Lysate (p/n W09-001-GX2) [-]. Primary Antibody: Anti-H2AXpS139 at 5 µg/mL overnight at 2-8°C. Secondary Antibody: Goat Anti-Rabbit IgG HRP (p/n 611-103-122) at 1:40,000 for 30 min at RT. Block: Universal Fluorescent Buffer (p/n MB-070) for 1hr at RT. Predicted MW: ~15kDa. Observed MW: ~17kDa. Exposure: 10sec.

Anti-H2AX pS139 (RABBIT) Antibody - Background

Histone H2A.X (phospho S139) antibody is ideal for western blotting and ELISA. Histones play a central role in transcription regulation, DNA repair, DNA replication and chromosomal stability. DNA is wrapped around histone-groups, consisting of the core histones H2A, H2B, H3 and H4. As a reaction on DNA Double-strand breaks (DSB) H2AX becomes phosphorylated on serine 139, called gamma-H2AX. ATM, ATR and PRKDCs, kinases of the PI3-family, are responsible for this phosphorylation. The modification can happen accidentally during replication fork collapse, exogenous genotoxic agents, may also occur during meiotic recombination events and immunoglobulin class switching in lymphocytes, in the response to ionizing radiation but also during controlled physiological processes such as V(D)J recombination. Mutagenesis experiments have shown that the modification is necessary for the proper formation of ionizing radiation induced foci in response to double strand breaks, but is not required for the recruitment of proteins to the site of DSBs. Gamma-H2AX is a sensitive target for looking at DSBs in cells. Dephosphorylation of Ser-140 by PP2A is required for DNA DSB repair. The role of the phosphorylated form of the histone in DNA repair is under. Anti-H2AX pS139 is ideal for researched interested in Histones, DNA Damage and Repair, and Epigenetics.