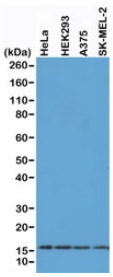
Recombinant Histone H2AX Antibody / H2AFX [clone RM214] (R20250)

Catalog No.	Formulation	Size
R20250-100UG	1 mg/ml in PBS with 50% glycerol, 1% BSA and 0.09% sodium azide	100 ug
R20250-25UG	1 mg/ml in PBS with 50% glycerol, 1% BSA and 0.09% sodium azide	25

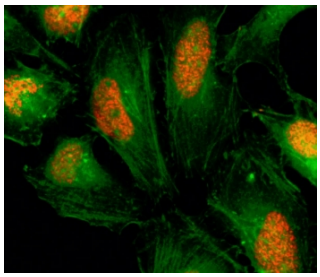
Recombinant RABBIT MONOCLONAL

Bulk quote request

Availability	1-3 business days
Species Reactivity	All Species
Format	Purified
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	RM214
Purity	Protein A purified from animal origin-free supernatant
UniProt	P16104
Gene ID	3014
Applications	Western Blot : 0.5-2ug/ml Immunocytochemistry : 1-2ug/ml ELISA : 0.2-1ug/ml
Limitations	This recombinant Histone H2AX antibody is available for research use only.



Western blot of A375, HEK293, HeLa and SK-MEL-2 whole cell lysates using recombinant Histone H2AX antibody at 0.5 ug/ml. Predicted molecular weight ~15 kDa.



ICC/IF staining of human HeLa cells using recombinant Histone H2AX antibody (red). Actin filaments have been labeled with fluorescein phalloidin (green).

Description

The Recombinant Histone H2AX antibody is a recombinant reagent designed to detect histone H2AX, a specialized variant of histone H2A that plays a central role in DNA damage signaling and chromatin structure. H2AX accounts for 2Ã¢Â€Â“25% of total H2A, depending on cell type, and is distinguished by an extended C-terminal tail that becomes phosphorylated at serine 139 in response to DNA double-strand breaks. This phosphorylated form, termed gamma H2AX, is one of the earliest markers of DNA damage. The Recombinant Histone H2AX antibody recognizes total H2AX, allowing researchers to assess both basal levels and the pool available for phosphorylation during genotoxic stress.

Histone H2AX is incorporated into nucleosomes along with H2B, H3, and H4, forming the fundamental repeating unit of chromatin. Its unique C-terminal extension serves as a molecular sensor for genome integrity. When DNA breaks occur, kinases such as ATM, ATR, and DNA-PK phosphorylate H2AX at Ser139, creating gamma H2AX foci that recruit and organize DNA repair complexes. The Recombinant Histone H2AX antibody complements phospho-specific reagents by providing a measure of total H2AX levels, ensuring that changes in phosphorylation are interpreted in the context of protein abundance.

In western blotting, the Recombinant Histone H2AX antibody detects H2AX in whole-cell or nuclear extracts, providing a baseline for studies of DNA damage response. In immunofluorescence, it shows nuclear staining consistent with chromatin distribution, enabling visualization of H2AX localization. In immunohistochemistry, the antibody highlights H2AX-enriched chromatin regions in tissues, offering insight into developmental biology and disease pathology. In chromatin immunoprecipitation (ChIP), the Recombinant Histone H2AX antibody can be used to enrich nucleosomal DNA containing H2AX, supporting research on genome-wide chromatin architecture.

This reagent is especially valuable in cancer research, toxicology, and radiation biology, where H2AX serves as a crucial biomarker for DNA damage and repair capacity. It is also relevant in stem cell and developmental studies, as proper incorporation of H2AX is important for genomic stability during rapid proliferation and differentiation. Synonym phrases such as recombinant H2AX antibody, recombinant histone H2AX core antibody, and recombinant total H2AX antibody improve accessibility for researchers referencing alternate terminology.

By delivering validated and reproducible detection, the Recombinant Histone H2AX antibody ensures reliable results in both basic and applied research. NSJ Bioreagents provides this antibody under strict quality control standards, giving scientists confidence in applications including western blotting, immunofluorescence, immunohistochemistry, and ChIP. With its specificity for H2AX, this reagent is an indispensable tool for studies of chromatin structure, genome stability, and DNA repair pathways.

This recombinant Histone H2AX antibody reacts to Histone H2AX protein, independent of post-translational modifications. No cross reactivity with other histone proteins.

Application Notes

The stated application concentrations are suggested starting points. Titration of the recombinant Histone H2AX antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

A peptide corresponding to the C-terminus of human Histone H2AX was used as the immunogen for this recombinant Histone H2AX antibody.

Storage

Store the recombinant Histone H2AX antibody at -20oC (with glycerol) or aliquot and store at -20oC (without glycerol).

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