

Recombinant Human H2A Histone Family, Member X

Cat. No. H2AFX-2059H **Lot. No.** (See product label)

SPECIFICATION

Product Overview

Species Human

Source E.coli

Description

H2AX is one of several genes coding for histone H2A. In humans and other eukaryotes, the DNA is wrapped around histone-groups, consisting of core histones H2A, H2B, H3 and H4. Thus, the H2AX contributes to the histone-formation and therefore the structure of DNA. H2AX becomes phosphorylated on serine 139, then called gamma-H2AX, as a reaction on DNA Double-strand breaks (DSB). The kinases of the PI3-family (Ataxia telangiectasia mutated, ATR and DNA-PKcs) are responsible for this phosphorylation, especially ATM. The modification can happen accidentally during replication fork collapse or in the response to ionizing radiation but also during controlled physiological processes such as V(D)J recombination. Gamma-H2AX is a sensitive target for looking at DSBs in cells. The role of the phosphorylated form of the histone in DNA repair is under discussion but it is known that because of the modification the DNA becomes less condensed. Delivering space for the recruitment of proteins necessary during repair of DSBs.

Source/Host E. coli.

Purity ≥98% (SDS-PAGE; HPLC).

Formulation Lyophilized.

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Long Term Storage -20°C.

Handling Avoid freeze/thaw cycles.

GENE INFORMATION

Gene Name H2AFX H2A histone family, member X [Homo sapiens]

Synonyms H2A histone family, member X; H2AX; H2A.X; H2A/X; H2AFX; histone H2A.x; H2AX histone;H2a/x

Gene ID 3014

mRNA Refseq NM_002105

Protein Refseq NP_002096

MIM 601772

UniProt ID P16104

Chromosome Location 11q23.2-q23.3

Pathway Systemic lupus erythematosus; DNA Repair; Telomere Maintenance

Function damaged DNA binding; DNA binding; enzyme binding; histone binding; protein binding

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