

# Active Recombinant Human Nucleosome, H2A-Ubiquityl Protein, CF

**Cat. No.** NUC-001    **Lot. No.** (See product label)

## SPECIFICATION

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
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| <b>Product Overview</b> | Recombinant Human Nucleosome, H2A-Ubiquityl Protein was expressed in E. coli.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Species</b>          | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Source</b>           | E.coli                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Description</b>      | <p>Within the context of chromatin, post-translational modifications (PTM's) of histones play important roles in nearly every biologically occurring DNA-related process. Ubiquitination is one such histone PTM, and while the modification was discovered more than three decades ago, its functions are less well understood than other histone modifications such as methylation and acetylation. Polycomb Repressive Complex 1 (PRC1) is an evolutionarily conserved, multi-subunit protein that is essential for maintaining epigenetic repression of key developmental loci in embryonic stem cells (ESCs). PRC1 proteins BMI1, RNF2 and others function together as a Ubiquitin E3 ligase that specifically mono-ubiquitinates histone H2A (H2AK119u1) which effects chromatin remodeling in a heritably transmissible manner. BMI1 activity has also been reported as necessary for constitutive heterochromatin formation in mammalian somatic cells, again demonstrating that ubiquitination of histones is important in maintaining genomic integrity and transcriptional control in eukaryotes.</p> |
| <b>Form</b>             | X mg/ml in 25 mM Tris pH 7.5, 150 mM NaCl, 2 mM DTT, 20% (v/v) Glycerol                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |

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|-------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| <b>Bio-activity</b>     | Concentrations for in vitro assays will depend on experimental conditions and detection methods.                            |
| <b>Molecular Mass</b>   | 227 kDa, average                                                                                                            |
| <b>Purity</b>           | >95%, by SDS-PAGE under reducing conditions and visualized by Colloidal Coomassie Blue stain.                               |
| <b>Storage</b>          | Use a manual defrost freezer and avoid repeated freeze-thaw cycles.<br>6 months from date of receipt, -70°C as supplied.    |
| <b>Shipping</b>         | The product is shipped with dry ice or equivalent. Upon receipt, store it immediately at the temperature recommended below. |
| <b>GENE INFORMATION</b> |                                                                                                                             |
| <b>UniProt ID</b>       | P0CG47, P04908, O60814, P62805, P68431                                                                                      |

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