

# Recombinant Human H2AFY2, His-tagged

**Cat. No.** H2AFY2-30081TH **Lot. No.** (See product label)

## SPECIFICATION

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|-------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Product Overview</b> | Recombinant fragment, corresponding to amino acids 164-372 of Human Macro H2A.2 with an N terminal His tag. Observed mwt: 27 kDa ;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Species</b>          | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Source</b>           | E.coli                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>ProteinLength</b>    | 164-372 a.a.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Description</b>      | <p>Chromatin of the inactive X chromosome (Xi) in female mammals is enriched for the core histone variant macroH2A. MacroH2A is evenly distributed throughout the male nucleus, while in female nuclei macroH2A additionally is enriched on chromatin of the Xi, and forms a structure referred to as a macro chromatin body (MCB) that is coincident with the Barr body. X-inactivation studies in differentiating female mouse embryonic stem cells demonstrate that macroH2A relocates from a centrosomal accumulation in the cytoplasm to chromatin of the Xi after the initial stages of X-inactivation have occurred. The cellular distribution of macroH2A during the cell cycle in synchronized cultured human female somatic cells has been determined. As the cells approach mitosis, the MCB (as detected by indirect immunofluorescence using anti-macroH2A antibodies) decreases dramatically in size to a small chromatic body (SCB). Interestingly, as the MCB shrinks in size, macroH2A begins to accumulate at the centrosome. During mitosis, macroH2A remains associated with specific regions of the Xi, with the most enrichment at Xq22-25. After mitosis, the levels of macroH2A at the centrosome decrease as the MCB reforms at the Xi.</p> |

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|                                 |                                                                                                                                                                                                                                    |
|---------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Conjugation</b>              | HIS                                                                                                                                                                                                                                |
| <b>Form</b>                     | Lyophilised:Reconstitute with 78 µl aqua dest.                                                                                                                                                                                     |
| <b>Storage buffer</b>           | Preservative: NoneConstituents: 0.5% Trehalose, 6M Urea, 100mM Sodium phosphate, 10mM Sodium chloride, pH 4.5                                                                                                                      |
| <b>Storage</b>                  | Shipped at 4°C. Upon delivery aliquot and store at -80oC. Avoid freeze / thaw cycles.                                                                                                                                              |
| <b>Sequences of amino acids</b> | DSDKEGTSNSTSEDGPGDGFILSSKSLVLGQKLSLTQSD ISHIGSMRVEGIVHPTT<br>AEIDLKEDIGKALEKAGGKEF LETVKELRKSQGPLEVAEAAVSQSSGLAAKFVIHCHI<br>PQWGS DKCEEQLEETIKNCLSA AEDKKLKSVAFPFPFSGRN CFPKQTAAQVTLKAI<br>SAHFDDSSASSLKNVYFLLFDSE SIGIYVQEMAKLDAK |

## GENE INFORMATION

|                        |                                                                             |
|------------------------|-----------------------------------------------------------------------------|
| <b>Gene Name</b>       | H2AFY2 H2A histone family, member Y2 [ Homo sapiens ]                       |
| <b>Official Symbol</b> | H2AFY2                                                                      |
| <b>Synonyms</b>        | H2AFY2; H2A histone family, member Y2; core histone macro-H2A.2; macroH2A2; |
| <b>Gene ID</b>         | 55506                                                                       |
| <b>mRNA Refseq</b>     | NM_018649                                                                   |
| <b>Protein Refseq</b>  | NP_061119                                                                   |
| <b>Uniprot ID</b>      | Q9P0M6                                                                      |
| <b>Chromosome</b>      | 10q22.1                                                                     |

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|-----------------|---------------------------------------------------------------------------------------------------------------|
| <b>Location</b> |                                                                                                               |
| <b>Pathway</b>  | Systemic lupus erythematosus, organism-specific biosystem; Systemic lupus erythematosus, conserved biosystem; |
| <b>Function</b> | DNA binding;                                                                                                  |

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