

## Product datasheet for RC210576

### MACROH2A1 (NM\_004893) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	MACROH2A1 (NM_004893) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	MACROH2A1
Synonyms:	H2A.y; H2A/y; H2AF12M; H2AFY; MACROH2A1.1; macroH2A1.2; mH2A1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC210576 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGTCGAGCCGGTGGGAAGAAGAAGTCCACCAAGACGTCCAGGTCTGCCAAAGCAGGAGTCATCTTTC  
CCGTGGGCGGATGCTGCGGTACATCAAGAAAGGCCACCCCAAGTACAGGATTGGAGTGGGGCACCCGT  
GTACATGGCCCGCTCCTGGAATACCTGACAGCGGAGATTCTGGAGCTGGCTGGCAATGCAGCGAGAGAC  
AACAAGAAGGGACGGGTACACCCCGGCACATCCTGCTGGCTGTGGCCAATGATGAAGAGCTGAATCAGC  
TGCTAAAAGGAGTCACCATAGCCAGTGGGGGTGTGTTACCCAACATCCACCCGAGTTGCTAGCGAAGAA  
GCGGGGATCCAAAGGAAAGTTGGAAGCCATCATCACACCACCCAGCCAAAAGGCCAAGTCTCCATCC  
CAGAAGAAGCCTGTATCTAAAAAGCAGGAGGCAAGAAAGGGGCCCGAAATCCAAGAAGAAGCAGGGTG  
AAGTCAGTAAGGCAGCCAGCGCCGACAGCACAACCGAGGGCACACCTGCCGACGGCTTCACAGTCTCTC  
CACCAAGAGCCTCTTCTTGCCAGAAGCTGAACCTTATTCACAGTGAATCAGTAATTTAGCCGGCTTT  
GAGGTGGAGGCCATAATCAATCTACCAATGCTGACATTGACCTTAAAGATGACCTAGGAAAACACGCTGG  
AGAAGAAAGGTGGCAAGGAGTTTGTGGAAGCTGTCTGGAACCTCCGAAAAAGAACGGGCCCTTGGAAAT  
AGCTGGAGCTGCTGTGACGCGAGGCCATGGCCTGCCTGCCAAGTTTGTGATCCACTGTAATAGTCCAGTT  
TGGGGTGCAGACAAGTGTGAAGAACTTCTGGAAAGACAGTGAAGAACTGCTTGGCCCTGGCTGATGATA  
AGAAGCTGAAATCCATTGCAATTCATCCATCGGCAGCGCAGGAACGGTTTTCCAAAGCAGACAGCAGC  
TCAGCTGATTCTGAAGGCCATCTCCAGTTACTTCGTGTCTACAATGTCCTCTTCCATCAAAAACGGGTGAC  
TTCGTGCTTTTTGACAGCGAGAGTATAGGCATCTATGTGCAGGAAATGGCCAAGCTGGACGCCAAC

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA



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**Protein Sequence:** >RC210576 protein sequence  
 Red=Cloning site Green=Tags(s)

MSSRGGKKKSTKTSRSKAGVIFPVGRMLRYIKKGHPKYRIGVGPVYMAAVLEYLTAEILELAGNAARD  
 NKKGRVTPRHILLAVANDEELNQLLKGVTIASGGVLPNIHPELLAKKRGSKGLEAIIPTPPAKKAKSPS  
 QKKPVSKKAGGKKGARKSKKKQGEVSKAASADSTTEGTPADGFTVLSTKSLFLGQKLNLIHSEISNLAGF  
 EVEAIINPTNADIDLKDDLGNLLEKKGKGFVEAVLELRKKNPLEVAGAAVSAGHGLPAKFVVIHCNSPV  
 WGADKCEELLGKTVKNCLALADDKLLKSIAPFISGSRNGFPKQTAACLILKAISSYFVSTMSSSIKTVY  
 FVLFDSESIGIYVQEMAKLDAN

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mk6380\\_b04.zip](https://cdn.origene.com/chromatograms/mk6380_b04.zip)

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



\* The last codon before the Stop codon of the ORF

**ACCN:** NM\_004893

**ORF Size:** 1116 bp

**OTI Disclaimer:** The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. [More info](#)

**OTI Annotation:** This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

**Components:** The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

**Reconstitution Method:**

1. Centrifuge at 5,000xg for 5min.
2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
3. Close the tube and incubate for 10 minutes at room temperature.
4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.
5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.

**RefSeq:** [NM\\_004893.3](#)

**RefSeq Size:** 1923 bp

**RefSeq ORF:** 1116 bp

**Locus ID:** 9555

**UniProt ID:** [O75367](#)

**Cytogenetics:** 5q31.1

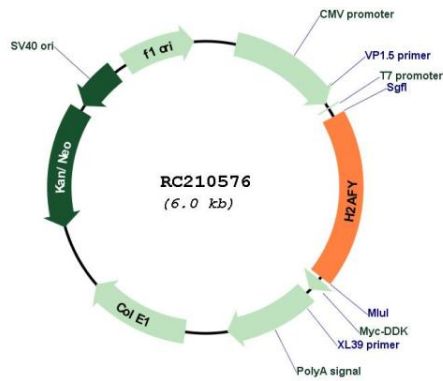
**Domains:** H2A, A1pp, histone

**Protein Pathways:** Systemic lupus erythematosus

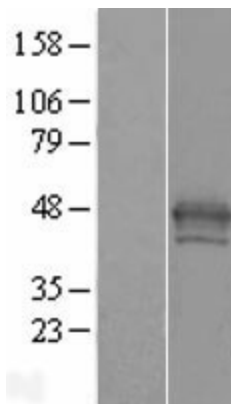
**MW:** 39.5 kDa

**Gene Summary:** Histones are basic nuclear proteins that are responsible for the nucleosome structure of the chromosomal fiber in eukaryotes. Nucleosomes consist of approximately 146 bp of DNA wrapped around a histone octamer composed of pairs of each of the four core histones (H2A, H2B, H3, and H4). The chromatin fiber is further compacted through the interaction of a linker histone, H1, with the DNA between the nucleosomes to form higher order chromatin structures. This gene encodes a replication-independent histone that is a member of the histone H2A family. It replaces conventional H2A histones in a subset of nucleosomes where it represses transcription and participates in stable X chromosome inactivation. Alternative splicing results in multiple transcript variants encoding different isoforms. [provided by RefSeq, Oct 2015]

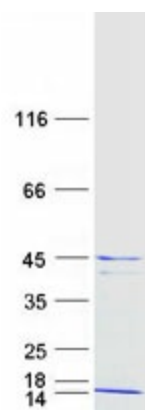
Product images:



Circular map for RC210576



Western blot validation of overexpression lysate (Cat# [LY421700]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with [RC223886] using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified H2AFY protein (Cat# [TP310576]). The protein was produced from HEK293T cells transfected with H2AFY cDNA clone (Cat# RC210576) using MegaTran 2.0 (Cat# [TT210002]).