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|--------------------------|----------------------------------------------------------------------------------------------|
| <b>Product name:</b>     | Mono-Methyl-Histone H4 (K21) Rabbit Polyclonal Antibody                                      |
| <b>Cat number:</b>       | ABN04155                                                                                     |
| <b>Conjugate:</b>        | Unconjugated                                                                                 |
| <b>Size:</b>             | 100µL                                                                                        |
| <b>Clone:</b>            | Polyclonal                                                                                   |
| <b>Concentration:</b>    | 1mg/ml                                                                                       |
| <b>Host:</b>             | Rabbit                                                                                       |
| <b>Isotype:</b>          | IgG                                                                                          |
| <b>Immunogen:</b>        | Synthetic Mono-Methyl peptide from human protein at AA range: 21                             |
| <b>Reactivity:</b>       | Human,Rat,Mouse                                                                              |
| <b>Applications:</b>     | WB 1:500-1:2000,ELISA 1:10000-1:20000                                                        |
| <b>Molecular Weight:</b> | 11kDa                                                                                        |
| <b>Purification:</b>     | Affinity purification                                                                        |
| <b>Form:</b>             | Liquid                                                                                       |
| <b>Buffer:</b>           | Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% New type preservative N.           |
| <b>Storage:</b>          | Store at 4°C short term. Aliquot and store at -20°C for 12 months. Avoid freeze/thaw cycles. |

**Background:**

Histones are basic nuclear proteins that are responsible for the nucleosome structure of the chromosomal fiber in eukaryotes. Two molecules of each of the four core histones (H2A, H2B, H3, and H4) form an octamer, around which approximately 146 bp of DNA is wrapped in repeating units, called nucleosomes. The linker histone, H1, interacts with linker DNA between nucleosomes and functions in the compaction of chromatin into higher order structures. This gene is intronless and encodes a replication-dependent histone that is a member of the histone H4 family. Transcripts from this gene lack polyA tails but instead contain a palindromic termination element. This gene is found in the histone microcluster on chromosome 6p21.33. [provided by RefSeq, Aug 2015],function:Core component of nucleosome. Nucleosomes wrap and compact DNA into chromatin, limiting DNA accessibility to the cellular machineries which require DNA as a template. Histones thereby play a central role in transcription regulation, DNA repair, DNA replication and chromosomal stability. DNA accessibility is regulated via a complex set of post-translational modifications of histones, also called histone code, and nucleosome remodeling.,PTM:Acetylation at Lys-6, Lys-9, Lys-13 and Lys-17 occurs in coding regions of the genome but not in heterochromatin.,PTM:Citrullination at Arg-4 by PADI4 impairs methylation.,PTM:Monomethylated, dimethylated or trimethylated at Lys-21. Monomethylation is performed by SET8. Trimethylation is performed by SUV420H1 and SUV420H2 and induces gene silencing.,PTM:Monomethylation at Arg-4 by PRMT1 favors acetylation at Lys-9 and Lys-13. Demethylation is performed by JMJD6.,PTM:Sumoylated, which is associated with transcriptional repression.,PTM:Ubiquitinated by the CUL4-DDB-RBX1 complex in response to ultraviolet irradiation. This may weaken the interaction between histones and DNA and facilitate DNA accessibility to repair proteins.,similarity:Belongs to the histone H4 family.,subunit:The nucleosome is a histone octamer containing two molecules each of H2A, H2B, H3 and H4 assembled in one H3-H4 heterotetramer and two H2A-H2B heterodimers. The octamer wraps approximately 147 bp of DNA.,