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## Datasheet for 000-006-K29 Histone H3 K9Me1 Biotin Conjugated

#### **Overview**

| Description: | Histone H3 K9me1 Biotin Conjugated peptide - 000-006-K29 |
|--------------|--|
| Item No.:    | 000-006-К29  |
| Size:        | 1 mg   |

#### **Product Details**

| Background: | The nucleosome is comprised of 146 bp of DNA wrapped around a series of histone proteins<br>arranged as an octamer consisting of 2 copies of histone H2A, H2B, H3 and H4. Within the<br>nucleosome core the histone proteins are covalent modified at specific residues predominantly<br>within the N-terminal tail including lysine (acetylation, methylation, SUMOylation, and<br>ubiquitinylation), arginine methylation and citrullination, serine and threonine phosphorylation,<br>as well as proline isomerization. The lysine side chains can carry up to three methyl groups<br>(mono-, di- and tri- methylated forms) and the arginine side chain can be monomethylated or<br>can be dimethylated as the symmetric or asymmetric forms. The modifications show temporal,<br>disease-specific, and other types of cell-specific regulation and there are specific families of<br>enzymes that regulate the methylation, demethylation, acetylation, deacetylation and other<br>modifications. Research has indicated that whereas the histone mark H3K4Me3 (tri-methyl<br>lysine 4 of histone H3) localizes to gene promoter regions (it is associated with transcriptional<br>activation) other modifications at H3K4 such as monomethyl is present predominantly at<br>enhancer sequences. Specific marks have been shown to be associated with the activation<br>(H3K9Me1, H3K27Me1, and H4K20Me1) or repression (H3K9Me2 and Me3, H3K27Me2 and<br>Me3, and H4K20Me2 and Me3) of genes. Monomethylation of H4 at K20, catalyzed by SET8, is<br>essential to genome replication and stability. Multiple DNA breaks are associated with<br>demethylation at this site, resulting in activation of p53 to avoid mitosis and aberrant<br>chromosomal activity. In mammalian stem cells, Xist expression blocks the formation of<br>H4K20me1, which is one of the first examples of a direct connection between chromatin and<br>stem cell differentiation. Histone H3 are ideal for researchers interested in Chromatin Research,<br>Epigenetics, Chromatin Modifiers, Histones and Modified Histones, and Phospho Specific<br>research. |
|-------------|--|
| Synonyms:   | H3.3AH3F3H3F3B, H3.3B, H3 histone, family 3A, histone H3.3, MGC87782, MGC87783, Histone<br>H3 peptide, control peptide, blocking peptide   |
| Conjugate:  | Biotin   |
| Туре:       | Peptide  |



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#### **Target Details**

**Purity/Specificity:** 

Greater than 95% specific peptide.

#### **Application Details**

| Application Note: | Histone H3 K9Me1 Biotin Conjugated Control Peptide is suitable for use in ELISA, Western Blot, Dot blot, PCA, and other assays. Control peptide should be used at 1.0 $\mu$ g per 1.0 $\mu$ l of antiserum in per assay. Specific conditions for reactivity should be optimized by the end user. |
|-------------------|--|
| Assay Dilutions:  | All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.  |

#### Formulation

| Physical State:               | Lyophilized                                  |
|-------------------------------|--|
| Concentration:                | 1.0 mg/mL by UV absorbance at 280 nm         |
| Buffer:                       | None   |
| Preservative:                 | None   |
| Stabilizer:                   | None   |
| <b>Reconstitution Volume:</b> | 1.0 mL                                       |
| <b>Reconstitution Buffer:</b> | Restore with deionized water (or equivalent) |

## Shipping & Handling

| Shipping Condition: | Ambient   |
|---------------------|---|
| Storage Condition:  | Store vial at 2 - 8 ° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. Dilute only prior to immediate use. |
| Expiration:         | Expiration date is one (1) year from date of receipt.   |

#### Disclaimer



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