Revision 1

Store at -20C

#84766

Acetyl-Histone H3 (Lys9) Matched Antibody Pair II

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Species Cross Reactivity: H Mk

UniProt ID: #P68431

Entrez-Gene Id: #8350

For Research Use Only. Not for Use in Diagnostic Procedures.

Product Includes	Product #	Quantity	Isotype/Source
Acetyl-Histone H3 (Lys9) (C5B11) Rabbit Monoclonal Antibody (BSA and Azide Free)	96075	100 µg	Rabbit IgG
Histone H3 (96C10) Mouse Monoclonal Antibody (BSA and Azide Free)	74150	100 µg	Mouse IgG1

Description

The Acetyl-Histone H3 (Lys9) Matched Antibody Pair is ideal for use with immunoassay technologies and high-throughput ELISA platforms requiring antibody pairs with specialized or custom antibody labeling. Labels include fluorophores, lanthanides, biotin, and beads. Platforms requiring conjugated Matched Antibody Pairs include MSD, Quanterix Simoa, Alpha Technology (AlphaScreen, AlphaLISA, LANCE, HTRF), and Luminex.

Learn how Matched Antibody Pairs move your projects forward, faster at cst-science.com/matched-antibody-pairs.

Specificity/Sensitivity

This kit detects proteins from the indicated species, as determined through in-house testing, but may also detect homologous proteins from other species.

Storage

Store at -20ºC. *This product will freeze at -20ºC so it is recommended to aliquot into single-use vials to avoid multiple freeze/thaw cycles*. A slight precipitate may be present and can be dissolved by gently vortexing. This will not interfere with antibody performance.

Directions for Use

Matched Antibody Pairs consist of capture and detection antibodies that bind to non-overlapping epitopes. For specific identification of the capture and detection antibodies in this pair, please refer to the data figure caption. Optimal dilutions/concentrations should be determined by the end user.

Formulation

Supplied in 1X PBS (10 mM Na_2HPO_4, 3 mM KCl, 2 mM KH_2PO_4, and 140 mM NaCl (pH 7.8)). BSA and Azide Free.

Background

Modulation of chromatin structure plays an important role in the regulation of transcription in eukaryotes. The nucleosome, made up of DNA wound around eight core histone proteins (two each of H2A, H2B, H3, and H4), is the primary building block of chromatin (1). The amino-terminal tails of core histones undergo various posttranslational modifications, including acetylation, phosphorylation, methylation, and ubiquitination (2-5). These modifications occur in response to various stimuli and have a direct effect on the accessibility of chromatin to transcription factors and, therefore, gene expression (6). In most species, histone H2B is primarily acetylated at Lys5, 12, 15, and 20 (4,7). Histone H3 is primarily acetylated at Lys9, 14, 18, 23, 27, and 56. Acetylation of H3 at Lys9 appears to have a dominant role in histone deposition and chromatin assembly in some organisms (2,3). Phosphorylation at Ser10, Ser28, and Thr11 of histone H3 is tightly correlated with chromosome condensation during both mitosis and meiosis (8-10). Phosphorylation at Thr3 of histone H3 is highly conserved among many species and is catalyzed by the kinase haspin. Immunostaining with phospho-specific antibodies in mammalian cells reveals mitotic phosphorylation at Thr3 of H3 in prophase and its dephosphorylation during anaphase (11).

Background References

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