Phospho-Histone H3 (Thr11) (C2A6) Rabbit mAb

**Applications**
- W, IP, F
- Endogenous

**Species Cross-Reactivity**
- H, M, R, (X)

**Molecular Wt.**
- 17 kDa

**Isotype**
- Rabbit IgG

**Background:** Modulation of chromatin structure plays an important role in the regulation of transcription in eukaryotes. The nucleosome, made up of four core histone proteins (H2A, H2B, H3 and H4), is the primary building block of chromatin (1). The amino-terminal tails of core histones undergo various post-translational 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, on 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 and 23 (2,3). Acetylation 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 of 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 of H3 Thr3 in prophase and its dephosphorylation during anaphase (11).

**Specificity/Sensitivity:** Phospho-Histone H3 (Thr11) (C2A6) Rabbit mAb detects endogenous levels of histone H3 only when phosphorylated at Thr11. This antibody does not cross-react with other phosphorylated histones.

**Source/Purification:** Monoclonal antibody is produced by immunizing animals with a synthetic phospho-peptide (KLH-coupled) corresponding to residues surrounding Thr11 of human histone H3.

**Flow cytometric analysis of untreated Jurkat cells, using Phospho-Histone H3 (Thr11) (C2A6) Rabbit mAb versus propidium iodide (DNA content).** The boxed population indicates Phospho-Histone H3 (Thr11)-positive cells.

**Recommended Antibody Dilutions:**
- Western blotting: 1:1000
- Immunoprecipitation: 1:25
- Flow Cytometry: 1:50

**For application specific protocols please see the web page for this product at www.cellsignal.com.**

**Storage:** Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at -20°C. Do not aliquot the antibody.

**Species cross-reactivity is determined by western blot.** Anti-rabbit secondary antibodies must be used to detect this antibody.

**Recommended Antibody Dilutions:**
- Western blotting: 1:1000
- Immunoprecipitation: 1:25
- Flow Cytometry: 1:50

**Important:** For western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween®20 at 4°C with gentle shaking, overnight.

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**Entrez Gene ID:** 8350
**UniProt ID:** P68431

**Background References:**