10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Anti-Histone H4 (Tyr-72), Phosphospecific Antibody

Catalog # AN1812

Product Information

Application	WB
Primary Accession	P62805
Reactivity	Rat
Host	Rabbit
Clonality	Rabbit Polyclonal
Isotype	IgG
Calculated MW	11367

Additional Information

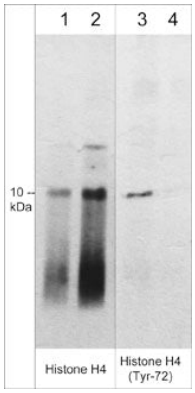
Gene ID	121504;554313;8294;8359;8360;8361;8362;8363;8364;8365;8366;8367;8368;8370
Other Names	Hist1H4 Histone H4
Target/Specificity	Chromatin structure is regulated through the activity of core histones (H2A, H2B, H3, and H4) that form the nucleosome. Histone activity is regulated by a variety of post-translational modifications, including acetylation, phosphorylation, and methylation. Histone acetylation and methylation occur primarily at lysine (K) residues in the amino-terminal tail domain. These modifications are important for the regulation of histone deposition, transcriptional activation, DNA replication and repair. Acetylation and methylation of specific lysine residues creates docking sites for DNA repair, transcription, and chromatin regulatory proteins. Methylation of histones may be regulated by phosphorylation events at sites downstream of the N-terminal tail. In histone H4, both EGFR activation and inonizing radiation induce EGFR nuclear translocation and Histone H4 (Tyr-72) phosphorylation, which creates a docking site for Set8 methyltransferase. This promotes K20 methylation in Histone H4 leading to DNA synthesis and repair.
Dilution	WB~~1:1000
Storage	Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	Anti-Histone H4 (Tyr-72), Phosphospecific Antibody is for research use only and not for use in diagnostic or therapeutic procedures.
Shipping	Blue Ice

Background

Chromatin structure is regulated through the activity of core histones (H2A, H2B, H3, and H4) that form the nucleosome. Histone activity is regulated by a variety of post-translational modifications, including acetylation, phosphorylation, and methylation. Histone acetylation and methylation occur primarily at lysine

(K) residues in the amino-terminal tail domain. These modifications are important for the regulation of histone deposition, transcriptional activation, DNA replication and repair. Acetylation and methylation of specific lysine residues creates docking sites for DNA repair, transcription, and chromatin regulatory proteins. Methylation of histones may be regulated by phosphorylation events at sites downstream of the N-terminal tail. In histone H4, both EGFR activation and inonizing radiation induce EGFR nuclear translocation and Histone H4 (Tyr-72) phosphorylation, which creates a docking site for Set8 methyltransferase. This promotes K20 methylation in Histone H4 leading to DNA synthesis and repair.

Images



Western blot image of human PC3 cells untreated (lanes 1 & 3) or treated with alkaline phosphatase to dephosphorylate histone H4 (lanes 2 and 4). The blot was probed with rabbit polyclonals anti-Histone H4 (lanes 1 & 2) and anti-Histone H4 (Tyr-72) phospho-specific antibody (lanes 3 & 4).