

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Acetyl Histone H4 when acetylated at Lys5 in Western blots.
Source	Monoclonal Rabbit IgG Clone # 2129F
Purification	Protein A or G purified from cell culture supernatant
Immunogen	Human Histone H4 synthetic peptide Accession # P62805 (H4_Human)
Conjugate	Alexa Fluor 700 Excitation Wavelength: 675-700 nm Emission Wavelength: 723 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. [General Protocols](#) are available in the Technical Information section on our website.

Western Blot	Optimal dilution of this antibody should be experimentally determined.
Immunocytochemistry	Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

BACKGROUND

Histone4 (H4/HIST1H4I; also H4M and HIST4H4) is a 12-15 kDa member of the histone H4 family of molecules. Human histone 4 is 103 amino acids (aa) in length. Full length histone 4 is identical in aa sequence to mouse histone 4. H4 is ubiquitously expressed. Histones are the organizing core of nucleosomes, forming an octamer comprised of four histone dimers. Nucleosomes wrap and compact DNA into chromatin, limiting DNA accessibility to the cellular machineries, mediating transcription regulation, DNA repair, DNA replication and chromosomal stability. Acetylation of the Histone H4 lysine residue at position 5 (K5) reduces the positive charge on the histones, relaxing the nucleosome; the relaxed state is associated with higher levels of gene transcription. Misregulation of acetylation has been linked to developmental and neurodegenerative disorders including Alzheimer's disease, and cancer. Butyryl-CoA has been shown to induce the K5 acetylation on H4.

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