

PRODUCT INFORMATION



Acetyl Lysine Polyclonal Antibody HRP Conjugate

Item No. 13726

Overview and Properties

Contents:	This vial contains 400 µl of protein A-affinity purified polyclonal antibody.
Immunogen:	Acetylated KLH
Species Reactivity:	(+) Species independent
Storage:	-20°C (as supplied)
Stability:	≥1 year
Storage Buffer:	PBS with 50% glycerol and 0.09% sodium azide
Concentration:	0.25 mg/ml
Host:	Rabbit
Applications:	ELISA, Immunocytochemistry (ICC), Immunofluorescence (IF), Immunoprecipitation (IP), and Western blot (WB); the recommended starting dilution is 1:100 for ICC and IF and 1:250 for WB. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

Description

Post-translational modifications of proteins play critical roles in the regulation and function of many known biological processes. Proteins can be post-translationally modified in many different ways, and a common post-transcriptional modification of lysine involves acetylation.¹ The conserved amino-terminal domains of the four core histones (H2A, H2B, H3, and H4) contain lysines that are acetylated by histone acetyltransferases (HATs) and deacetylated by histone deacetylases (HDACs).² Protein post-translational reversible lysine Nε-acetylation and deacetylation have been recognized as an emerging intracellular signaling mechanism that plays critical roles in regulating gene transcription, cell-cycle progression, apoptosis, DNA repair, and cytoskeletal organization.³ The regulation of protein acetylation status is impaired in the pathologies of cancer and polyglutamine diseases, and HDACs have become promising targets for anti-cancer drugs currently in development.^{4,5}

References

1. Yang, X.J. Multisite protein modification and intramolecular signaling. *Oncogene* **24(10)**, 1653-1662 (2005).
2. Hassig, C.A. and Schreiber, S.L. Nuclear histone acetylases and deacetylases and transcriptional regulation: HATs off to HDACs. *Curr. Opin. Chem. Biol.* **1(3)**, 300-308 (1997).
3. Yang, X.J. Lysine acetylation and the bromodomain: A new partnership for signaling. *BioEssays* **26(10)**, 1076-1087 (2004).
4. Hughes, R.E. Polyglutamine disease: Acetyltransferases awry. *Curr. Biol.* **12(4)**, R141-R143 (2002).
5. Vigushin, D.M. and Coombes, R.C. Targeted histone deacetylase inhibition for cancer therapy. *Curr. Cancer Drug Targets* **4(2)**, 205-218 (2004).

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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