

Anti-Acetylated Lysine

Catalog# SMC-153 C/D
Size: 25/100µl

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This product is for *in vitro* research use only and is not intended for use in humans or animals

StressMarq

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Product	Mouse anti-acetylated lysine monoclonal antibody
Clone	7F8
Immunogen	Acetylated KLH
Host and Subclass	Mouse, IgG ₁
Cited Applications	WB, ELISA, IHC, binds Protein-G
Specificity	Detects proteins containing acetylated lysine residues in ELISA and WBs. Does not detect non-acetylated lysine residues.
Species cross-reactivity	Bovine, Avian. Not otherwise tested.
Format	Protein G purified. Mouse immunoglobulin in PBS, pH 7.4, 0.09% sodium azide in 50% glycerol
Concentration and working dilution	1.0mg/mL; 1µg/ml was sufficient for detection of 20µg acetylated chicken erythrocyte histones on western blot
Storage and stability	-20°C; 1 year+; shipped on cold packs or ambient

Scientific Background

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 posttranslational reversible lysine *N*^ε-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 (4), and HDACs have become promising targets for anti-cancer drugs currently in development (5).

Selected References

1. Yang XJ. (2005). *Oncogene*. 24:1653-1662.
2. Hassig, C.A. and Schreiber, S.L. (1997). *Curr. Opin. Chem. Biol.* 1(3): 300-308.
3. Yang XJ. (2004). *Bioessays* 26:1076-1087.
4. Hughes, R.E. (2002). *Curr. Biol.* 12: R141-R143.
5. Vigushin, D.M. and Coombes, R.C. (2004). *Curr. Cancer Drug Targets* 4: 205-218.

Certificate of Analysis

1µg of SMC-153 was sufficient to detect of 20µg acetylated chicken erythrocyte histones (sodium butyrate-treated) on western blot by colorimetric immunoblot analysis using Goat anti-mouse IgG:HRP as the secondary antibody.

Material Safety Data Sheet

Anti-Acetylated Lysine (Monoclonal Antibody) SMC-153

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The below information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. StressMarq shall not be held liable for any damage resulting from handling or from contact with the above product. See the Technical Specification, Packing Slip, Invoice, and Product Catalogue for additional terms and conditions of sale.

Hazardous Ingredients

The physical, chemical and toxicological properties of these components have not been fully investigated. It is recommended that all laboratory personnel follow standard laboratory safety procedures when handling this product. Safety procedures should include wearing OSHA approved safety glasses, gloves and protective clothing. Direct physical contact with this product should be avoided.

<u>Known Hazardous Components</u>	<u>CAS Number</u>	<u>Percent</u>
Sodium Azide	26628-22-8	0.09

Physical Data

This product consists of mouse immunoglobulin in PBS containing 0.09% sodium azide in 50% glycerol shipped on gel packs. The physical properties of this product have not been investigated thoroughly.

Fire and Explosion Hazard and Reactivity Data

NOT APPLICABLE

Toxicological Properties

May be harmful by inhalation, ingestion, or skin absorption. The toxicological properties of this product have not been investigated thoroughly. Exercise due caution.

Preventative Measures

Wear chemical safety goggles and compatible chemical-resistant gloves. Avoid inhalation, contact with eyes, skin or clothing.

Spill and Leak Procedures

Observe all federal, state and local environmental regulations.

- Wear protective equipment.
- Absorb on sand or vermiculite and place in closed containers for disposal.
- Dispose or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

First Aid Measures

- If swallowed, wash out mouth with water, provided person is conscious. Call a physician.
- In case of skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes. If a rash or other irritation develops, call a physician.
- If inhaled, remove to fresh air. If breathing becomes difficult, call a physician.
- In case of eye contact, flush with copious amounts of water for at least 15 minutes while separating the eyelids with fingers. Call a physician.

Authorized: StressMarq Biosciences Inc.
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