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Anti-Methylated Lysine Antibody

Rabbit Anti-Methylated Lysine Polyclonal
Catalog No. SPC-158



Discovery through partnership | Excellence through quality

Overview

Product Name

Methylated Lysine Antibody

Description

Rabbit Anti-Methylated Lysine Polyclonal

Species Reactivity

Species Independent

Applications

WB, ICC/IF, IP, ELISA

Antibody Dilution

WB (1:5000), ICC/IF (1:50); optimal dilutions for assays should be determined by the user.

Host Species

Rabbit

Immunogen

Methylated KLH Conjugated

Concentration

0.25 mg/ml

Conjugates

Alkaline Phosphatase, APC, ATTO 390, ATTO 488, ATTO 565, ATTO 594, ATTO 633, ATTO 655, ATTO 680, ATTO 700, Biotin, FITC, HRP, PE/ATTO 594, PerCP, RPE, Streptavidin, Unconjugated

Properties

Storage Buffer

PBS, 50% glycerol

Storage Temperature

-20°C

Shipping Temperature

Blue Ice or 4°C

Purification

Protein A purified

Clonality

Polyclonal

Specificity

Detects proteins containing methylated lysine residues.

Cite This Product

Rabbit Anti- Methylated Lysine Polyclonal (StressMarq Biosciences Inc., Victoria BC CANADA, Catalog # SPC-158)

Certificate Of Analysis

0.2-0.5 µg/ml of SPC-158 was sufficient for detection of the methylated histone by western blot analysis using melanoma cells in TBSt.

Biological Description

Alternative Names

Dimethyllysine Antibody, Methyl lysine Antibody, N epsilon dimethyl lysine Antibody, Trimethyl lysine Antibody

Research Areas

Cell Signaling, Methylation, Post-translational Modifications

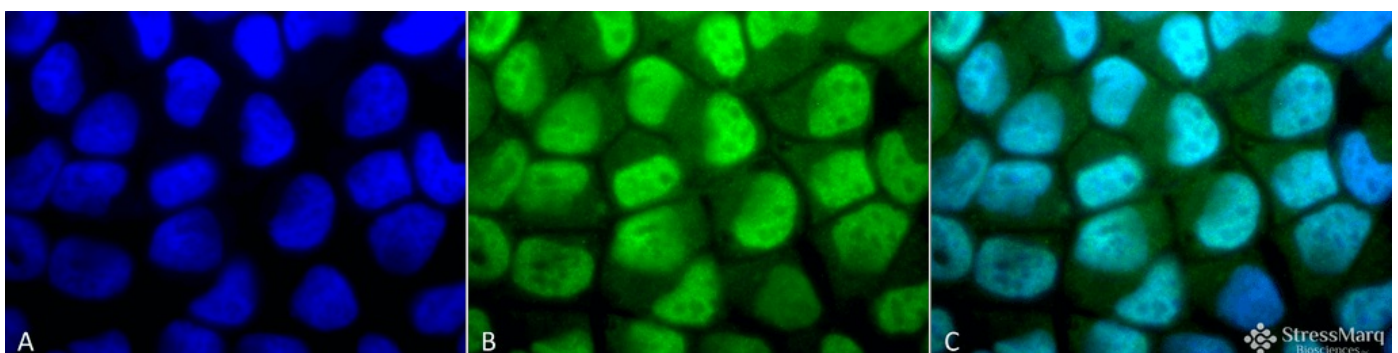
Scientific Background

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 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 (4), and HDACs have become promising targets for anti-cancer drugs currently in development (5).

References

1. Yang X.J. (2005) *Oncogene*. 24:1653-1662.
 2. Hassig C.A. and Schreiber S.L. (1997) *Curr. Opin. Chem. Biol.* 1(3): 300-308.
 3. Yang X.J. (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.
 6. Chan H.M. et al. (2001) *Nat. Cell Biol.* 3: 667-674.
 7. Martinez-Balbas M.A. et al. (2000) *EMBO J.* 19: 662-671.
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Product Images



Immunocytochemistry/Immunofluorescence analysis using Rabbit Anti-Methylated Lysine Polyclonal Antibody (SPC-158). Tissue: HeLa Cells. Species: Human. Fixation: 2% Formaldehyde for 20 min at RT. Primary Antibody: Rabbit Anti-Methylated Lysine Polyclonal Antibody (SPC-158) at 1:50 for 12 hours at 4°C. Secondary Antibody: FITC Goat Anti-Rabbit (green) at 1:200 for 2 hours

at RT. Counterstain: DAPI (blue) nuclear stain at 1:40000 for 2 hours at RT. Localization: Nucleus. Cytoplasm. Magnification: 100x. (A) DAPI (blue) nuclear stain. (B) Anti-Methylated Lysine Antibody. (C) Composite.



Western blot analysis of Bovine serum albumin showing detection of Methylated Lysine protein using Rabbit Anti-Methylated Lysine Polyclonal Antibody (SPC-158). Primary Antibody: Rabbit Anti-Methylated Lysine Polyclonal Antibody (SPC-158) at 1:1000. Methylated Lysine in BSA (Left) and Methylated BSA (Right).

Product Citations (7)

Western Blot

Purification and properties of glycerol-3-phosphate dehydrogenase from the liver of the hibernating ground squirrel, *Urocitellus richardsonii*.

Ruberto, A.A., Childers, C.L. and Storey, K.B. (2016) *Comp Biochem Physiol B Biochem Mol Biol*. [Epub ahead of print]

PubMed ID: 27521690 **Reactivity:** Squirrel **Applications:** Western Blot

The Lysine Residues within the Human Ribosomal Protein S17 (RPS17) Sequence Naturally Inserted into the Viral Nonstructural Protein of a Unique Strain of Hepatitis E Virus are Important for Enhanced Virus Replication.

Kenney, S.P. and Meng, X.J. (2015) *J Virol*. 89(7):3793-803.

PubMed ID: 25609799 **Reactivity:** Hamster **Applications:** Western Blot

Regulation of Skeletal Muscle Carbohydrate Metabolism During Mammalian Hibernation.

Bell, R.A.V. (2014) Carleton University Dissertation

PubMed ID: **Reactivity:** *Ictidomys tridecemlineatus* (ground squirrel) **Applications:** Western Blot

Purification and properties of glyceraldehyde-3-phosphate dehydrogenase from the skeletal muscle of the hibernating ground squirrel, *Ictidomys tridecemlineatus*.

Bell, R.A.V., Smith, J.C. and Storey, K.B. (2014) *PeerJ*. 2:e634.

PubMed ID: 25374779 **Reactivity:** *Ictidomys tridecemlineatus* (ground squirrel) **Applications:** Western Blot

Other Citations

Purification and characterization of a urea sensitive lactate dehydrogenase from the liver of the African clawed frog, *Xenopus laevis*.

Katzenback, B.A., Dawson, N.J., Storey, K.B. (2014) *J Comp Physiol B*. 184(5):601-11.

PubMed ID: 24651940 **Reactivity:** *Xenopus laevis* **Applications:** Dot Blot

Stable suppression of lactate dehydrogenase activity during anoxia in the foot muscle of *Littorinalittorea* and the potential role of acetylation as a novel posttranslational regulatory mechanism.

Shahriaria A., Dawson N., Bell R., Storey, K. (2013) *Enzyme Res*. 2013: 461374.

PubMed ID: 24233354 **Reactivity:** Littorinalittorea (intertidal marine snail) **Applications:** Dot Blot

Purification and Properties of White Muscle Lactate Dehydrogenase from the Anoxia-Tolerant Turtle, the Red-Eared Slider, *Trachemys scripta elegans*.

Dawson, N.J., Bell, R.A.V. and Storey, K.B. (2013) *Enzyme Res.* 2013:784973.

PubMed ID: 23533717 **Reactivity:** Turtle **Applications:** Dot Blot

Reviews

Based on validation through cited publications.



StressMarq Biosciences

June 15, 2016: