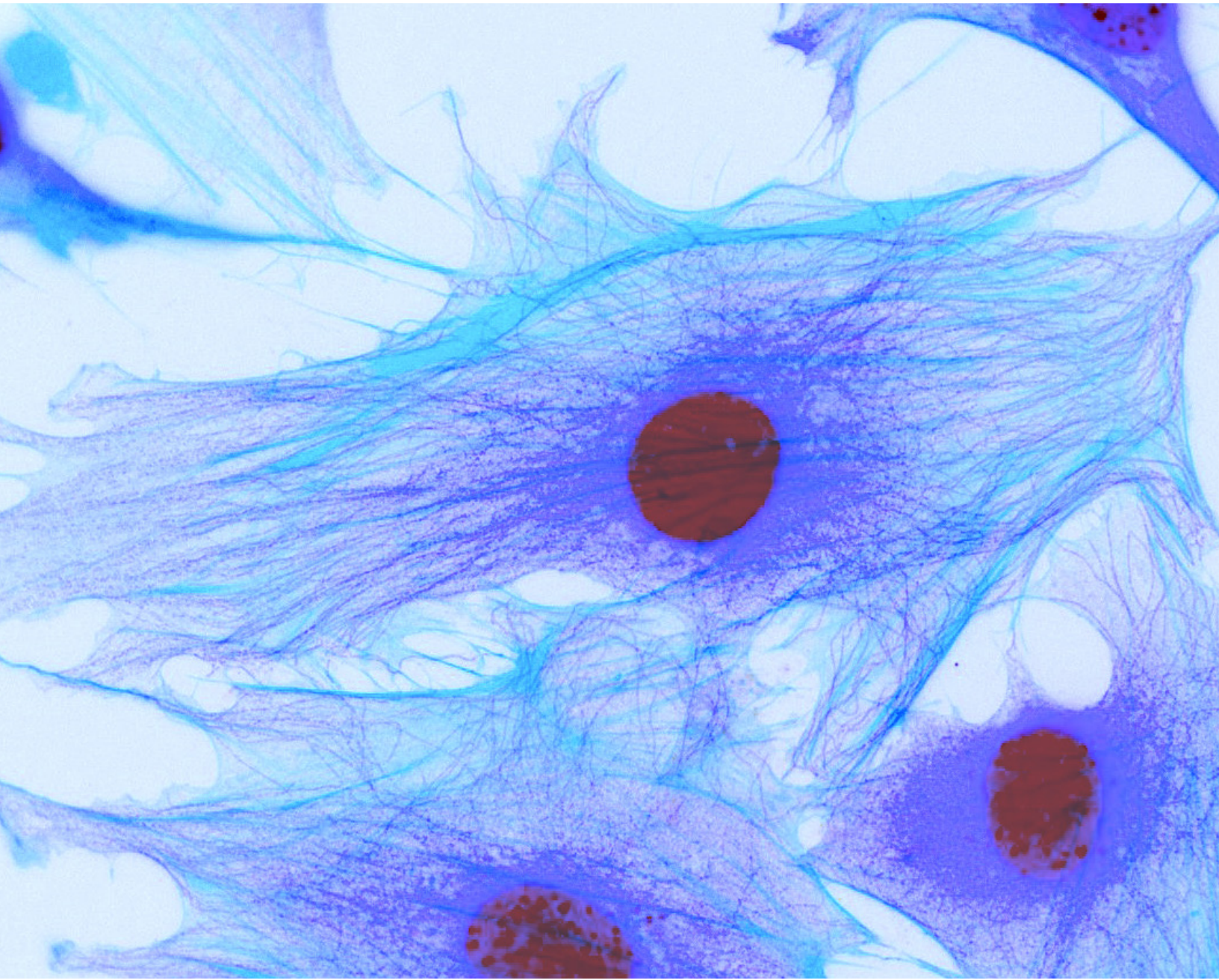


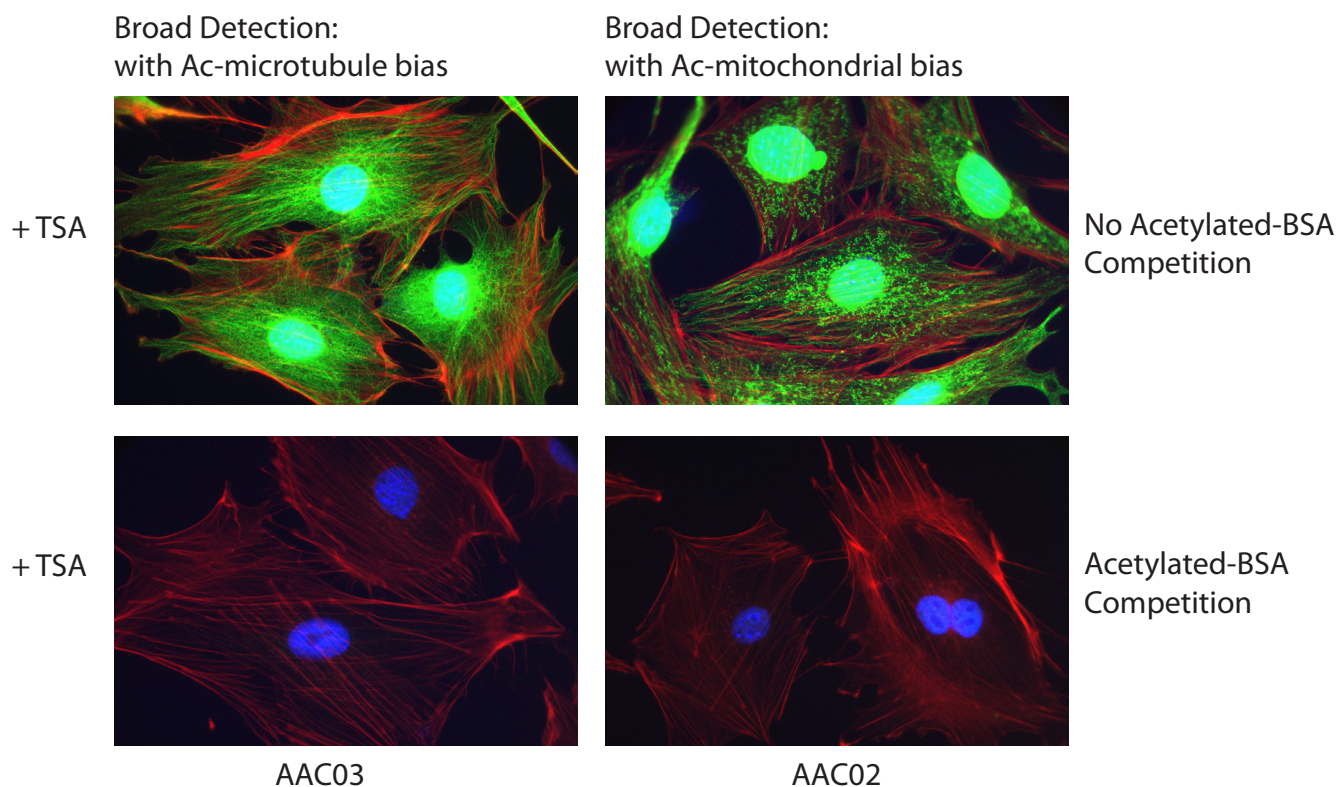
Acetyl-Lysine Investigation and Discovery... Simplified

New Toolkits for Acetyl-Lysine
Detection and Visualization



Unique IF Tools for Acetyl-Lysine Research

Lysine acetylation is a critical post-translational modification that has been shown to play a fundamental role in epigenetic histone regulation⁽¹⁾. Recent acetylome studies indicate that acetyl-lysine regulation expands well beyond histones, and can target thousands of proteins and many different cellular processes. Many of these acetylome studies often link changes in global acetylation to disease progression⁽²⁾. Of interest, changes in the acetylated microtubule network as well as mitochondrial proteins have been linked to many disease pathologies^(3,4). Signal-Seeker's two newly developed acetyl-lysine antibodies have been validated for use in immunofluorescence.



Acetylated proteins (green): AAC02 or AAC03 (1:500), anti-mouse 488

Actin (Red): Rhodamine Phalloidin

Nucleus (Blue): DAPI

NEW Acetyl-Lysine Products

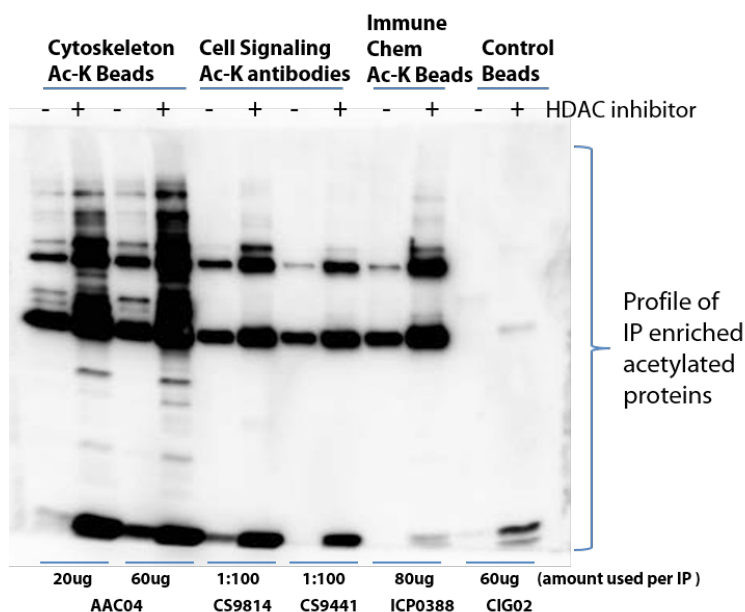
Description	Amount	Item #
Signal-Seeker™ Acetyl-Lysine Detection Kit	30 assays	BK163
Signal-Seeker™ Acetyl-Lysine Detection Kit	10 assays	BK163-S
Acetyl-Lysine Affinity Beads	40 assays	AAC04-beads
Acetyl-Lysine Control Beads	10 assays	CIG02-beads
Acetyl-Lysine Mouse Antibody (3C6.08.20)	1 x 200 µl	AAC01
Acetyl-Lysine Mouse Antibody (7B5A1)	2 x 100 µl	AAC02
Acetyl-Lysine Mouse Antibody (19C4B2.1)	2 x 100 µl	AAC03
Acetyl-Lysine Mouse Antibody-HRP labeled	1 x 100 µl	AAC03-HRP

References

- Verdin E, Ott M. 50 years of protein acetylation: from gene regulation to epigenetics, metabolism and beyond. *Nat Rev Mol Cell Biol.* **2015**;16(4):258-64.
- Iyer A, Fairlie DP, Brown L. Lysine acetylation in obesity, diabetes and metabolic disease. *Immunol Cell Biol.* **2012**;90(1):39-46.
- Li L, Yang XJ. Tubulin acetylation: responsible enzymes, biological functions and human diseases. *Cell Mol Life Sci.* **2015**;72(22):4237-55.
- Wagner GR, Payne RM. Mitochondrial acetylation and diseases of aging. *J Aging Res.* **2011**;2011:234875.

A New Level of Excellence

Superior Acetylated Protein Enrichment



	Cytoskeleton (AAC04-beads; 60 µg)	Cell Signaling (CS9814)	Cell Signaling (CS9441)	Immunechem (ICP0388-beads)
Densitometry Measurement (TSA treated)	73250	28846	18379	24383
Number of unique bands (TSA treated)	++++	++	+	++

Figure 2 Legend: Various acetyl-lysine affinity reagents were used to IP acetylated proteins from Cos-7 cells either treated (+) or untreated (-) with TSA (1 µM) and nicotinamide (1mM) for 6 hours. IPs were performed according to the manufacturer's instructions. Western blot was performed using AAC03-HRP antibody (1:3000).

Applications

Application	Product	Validation Data
Western Blot	Acetyl-Lysine Mouse Antibody-HRP labeled, Cat. # AAC03-HRP	Yes
	Acetyl-Lysine Mouse Antibody (7B5A1), Cat. # AAC02	Yes
	Acetyl-Lysine Mouse Antibody (19C4B2.1), Cat. # AAC03	Yes
	Acetyl-Lysine Mouse Antibody (3C6.08.20), Cat. # AAC01	Yes
Immunofluorescence	Acetyl-Lysine Mouse Antibody (7B5A1), Cat. # AAC02	Yes
	Acetyl-Lysine Mouse Antibody (19C4B2.1), Cat. # AAC03	Yes
	Acetyl-Lysine Mouse Antibody (3C6.08.20), Cat. # AAC01	Yes
	Acetyl-Lysine Mouse Antibody (3C6.08.20), Cat. # AAC01	Yes
Immunoprecipitation	Signal-Seeker™ Acetyl-Lysine Detection Kit, Cat. # BK163	Yes
	Signal-Seeker™ Acetyl-Lysine Detection Kit, Cat. # BK163-S	Yes
	Acetyl-Lysine Affinity Beads, Cat. # AAC04-beads	Yes
	Acetyl-Lysine Mouse Antibody (7B5A1), Cat. # AAC02	Yes
	Acetyl-Lysine Mouse Antibody (19C4B2.1), Cat. # AAC03	Yes
	Acetyl-Lysine Mouse Antibody (3C6.08.20), Cat. # AAC01	Yes
Chromatin IP	Acetyl-Lysine Mouse Antibody (7B5A1), Cat. # AAC02	Yes
	Acetyl-Lysine Mouse Antibody (19C4B2.1), Cat. # AAC03	Yes
	Acetyl-Lysine Mouse Antibody (3C6.08.20), Cat. # AAC01	Yes

*Recommended products for each application are highlighted in blue

Simplified Acetyl-Lysine Detection

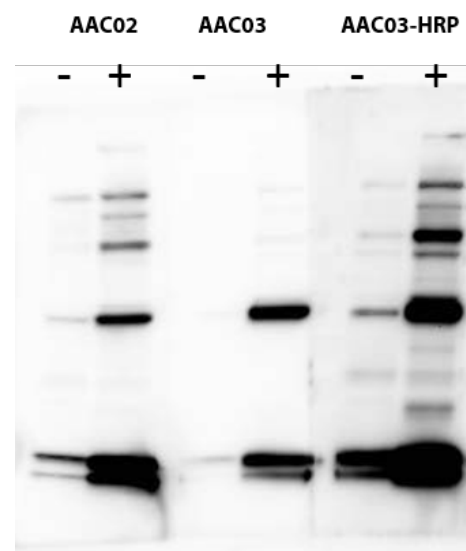
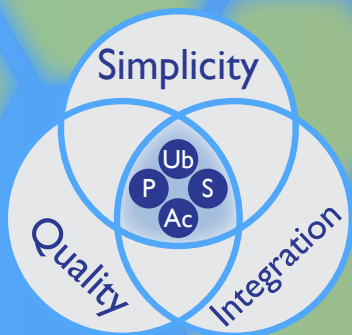


Figure 3 Legend: Cos-7 cells were either treated (+) or untreated (-) with TSA (1 µM) and nicotinamide (1mM) for 6 hours. 30 µg of Cos-7 cell lysate were separated by SDS-PAGE and transferred to PVDF. Acetylated proteins were visualized using AAC02 (1:500), AAC03 (1:500), or AAC03-HRP (1:3000). HRP labeled Mouse secondary was at 1:10,000 for AAC02 and AAC03, but not AAC03-HRP. Strongly enhanced bands at 55 and 14-16 kDa in TSA-treated lysate correspond to acetylated tubulin and histone proteins, respectively.



Ordering information
for USA and Canada:

Online - cytoskeleton.com

Phone - 303.322.2254

Fax - 303.322.2257

Cytoskeleton, Inc.

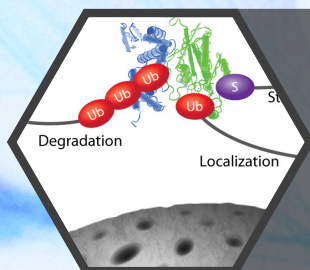
1830 S. Acoma St.,

Denver, CO 80223, USA.

International Customers

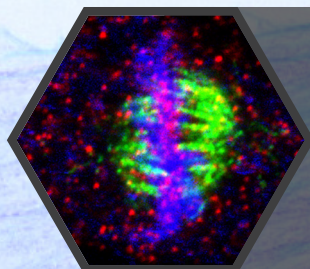
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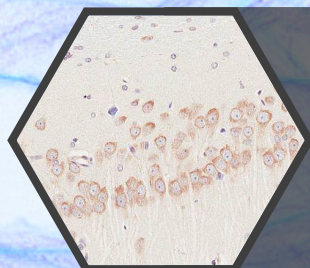
Signal Seeker™ Ubiquitin Tools

- Mono-/Poly-Ubiquitination Detection Kit
- Mono-/Poly-Ubiquitination Affinity Beads
- Ubiquitin Antibody-HRP labeled



Signal Seeker™ SUMOylation 2/3 Tools

- SUMO 2/3 Detection Kit
- SUMO 2/3 Affinity Beads
- SUMO 2/3 IF and HRP labeled Antibodies



Signal Seeker™ Phosphotyrosine Tools

- Phosphotyrosine Detection Kit
- Phosphotyrosine Affinity Beads
- Phosphotyrosine IF and HRP labeled Antibodies



The Protein
Experts

Cytoskeleton, Inc.