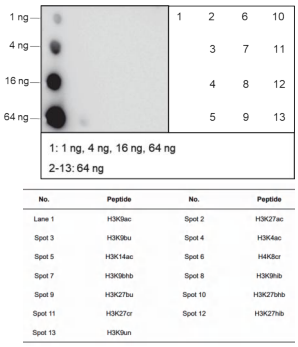
PTM BIO
Pioneer in Proteomics

Antibodies for Epigenetic Research

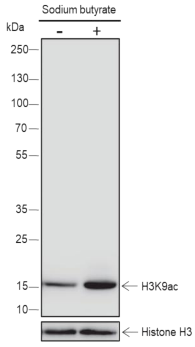
ChIP Validated

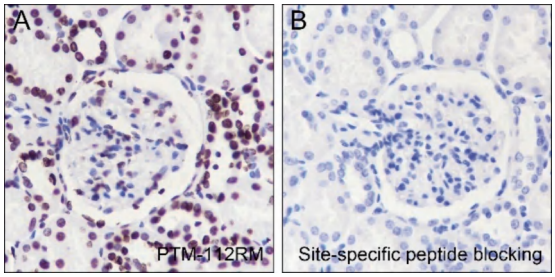
Rigorous Validation & Quality Assurance

Exceptional Specificity



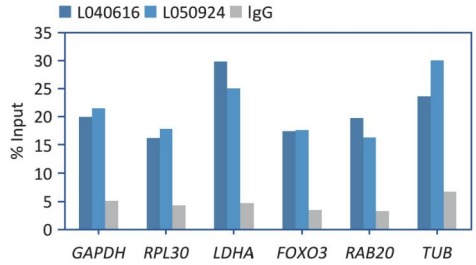
No.	Peptide	No.	Peptide
Lane 1	H3K9ac	Spot 2	H3K27ac
Spot 3	H3K9bu	Spot 4	H3K4ac
Spot 5	H3K14ac	Spot 6	H4K8cr
Spot 7	H3K9bhb	Spot 8	H3K9hib
Spot 9	H3K27bu	Spot 10	H3K27bhb
Spot 11	H3K27cr	Spot 12	H3K27hib
Spot 13	H3K9un		





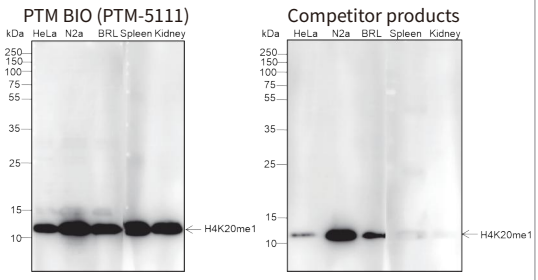
① Dot blot validation (PTM-112RM) ② Treatment validation (PTM-112RM) ③ Blocking peptide validation (PTM-112RM)

Stable Lot-to-Lot Consistency



Anti-Tri-Methyl-Histone H3 (Lys23) Rabbit mAb (PTM-638RM, Lot L040616 & L050924) demonstrates consistent lot-to-lot performance in ChIP assays with HeLa cells.

Ultra-High Sensitivity



Case Study

Histone Lactylation Mediates SMC Regulation of Chemoresistance in Colorectal Cancer

Article

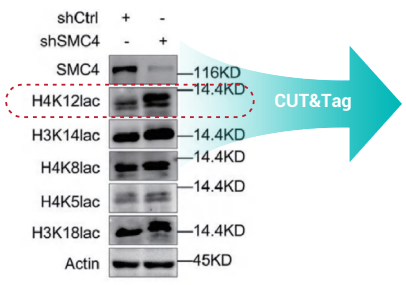
Cell Metabolism

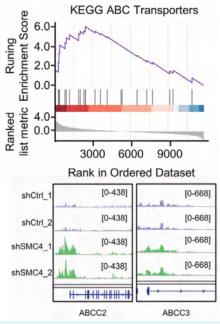
The diapause-like colorectal cancer cells induced by SMC4 attenuation are characterized by low proliferation and chemotherapy insensitivity

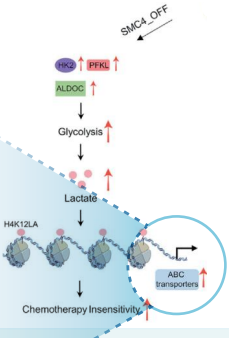
Journal	Impact Factor	PMID	Screened Targets:
Cell Metabolism	27.7	37543034	H4K12la (PTM-1411RM)/H3K14la (PTM-1414RM)/ H4K8la (PTM-1415RM)/H4K5la (PTM-1409)/ H3K18la (PTM-1427RM)

Background:

SMC4 is a negative regulator of diapause-like state in colorectal cancer cells. SMC4 knockdown upregulates glycolytic enzymes, increases lactate production, and is associated with chemoresistance.







Target Selection:
Screening for SMC4-regulated lactylation sites (shSMC4 vs. shCtrl) identified H4K12la as most different, selected for further study.

CUT&Tag Controls: shSMC4 vs. shCtrl

Results:
GSEA showed ABC transporter enrichment upon SMC4 knockdown; H4K12la at transcription start sites increased transporter expression, drug efflux, and chemoresistance.

Conclusion:
SMC4 plays a critical role in colorectal cancer cells' diapause-like state. Its downregulation enhances glycolysis, alters histone lactylation, increases ABC transporter expression, and disrupts cell division, thereby affecting chemosensitivity and patient prognosis.

Selected Products

For the full product list, please visit our official website: https://www.ptmbio.com/

PTM Type	Cat. No.	Product Name	Applications	Reactivity
Lactylation	PTM-1422RM	Anti-L-Lactyl-Histone H2A.Z (Lys11) Rabbit mAb	WB/IHC-P/ICC/IF/ChIP	H/M/R
	PTM-1426RM	Anti-L-Lactyl-Histone H2B (Lys15) Rabbit mAb	WB/ChIP	H/M
	PTM-1419RM	Anti-L-Lactyl-Histone H3 (Lys9) Rabbit mAb	WB/IHC-P/ChIP	H/M/R
	PTM-1414RM	Anti-L-Lactyl-Histone H3 (Lys14) Rabbit mAb	WB/ICC/IF/ChIP	H/M/R
	PTM-1427RM	Anti-L-Lactyl-Histone H3 (Lys18) Rabbit mAb–ChIP Grade	WB/ChIP/CUT&Tag	H/M
	PTM-1413RM	Anti-L-Lactyl-Histone H3 (Lys23) Rabbit mAb	WB/IHC-P/ChIP	H/M/R
	PTM-1428RM	Anti-L-Lactyl-Histone H3 (Lys27) Rabbit mAb	WB/ChIP/IP	H/M/R
	PTM-1415RM	Anti-L-Lactyl-Histone H4 (Lys8) Rabbit mAb	WB/ChIP/CUT&Tag	H/M/R
	PTM-1411RM	Anti-L-Lactyl-Histone H4 (Lys12) Rabbit mAb	WB/IHC-P/IP/ChIP	H/M/R
	PTM-1417RM	Anti-L-Lactyl-Histone H4 (Lys16) Rabbit mAb	WB/IHC-P/ICC/IF/ChIP	H/M/R
Acetylation	PTM-124	Anti-Acetyl-Histone H3 (Lys4) Rabbit pAb	WB/ChIP	H/M/R
	PTM-112RM	Anti-Acetyl-Histone H3 (Lys9) Rabbit mAb	WB/IHC-P/ChIP/CUT&Tag	H/M/R
	PTM-113RM	Anti-Acetyl-Histone H3 (Lys14) Rabbit mAb	WB/IHC-P/ICC/IF/ChIP	H/M/R
	PTM-114RM	Anti-Acetyl-Histone H3 (Lys18) Rabbit mAb	WB/IHC-P/ChIP	H/M/R
	PTM-115RM	Anti-Acetyl-Histone H3 (Lys23) Rabbit mAb	WB/IHC-P/ChIP/IP	H/M/R
	PTM-116RM	Anti-Acetyl-Histone H3 (Lys27) Rabbit mAb	WB/IHC-P/ICC/IF/ChIP/IP	H/M/R
	PTM-117RM	Anti-Acetyl-Histone H3 (Lys36) Rabbit mAb	WB/IHC-P/ICC/IF/ChIP	H/M/R/Pig
	PTM-162	Anti-Acetyl-Histone H3 (Lys56) Mouse mAb	WB/ICC/IF/ChIP	H/M/R
	PTM-129RM	Anti-Acetyl-Histone H3 (Lys64) Rabbit mAb	WB/IHC-P/ChIP	H/M/R

Target Function	Cat. No.	Product Name	Applications	Reactivity
Histone deacetyl-ase	PTM-7488	Anti-HDAC2 Rabbit mAb	WB/IHC-P/ICC/IF/FC/IP/ChIP	H/M/R
	PTM-6070	Anti-HDAC3 Mouse mAb	WB/IHC-P	H/R
	PTM-5551	Anti-HDAC4 Rabbit mAb	WB	H/M/R
	PTM-6669	Anti-HDAC6 Rabbit mAb	WB/IHC-P	H
	PTM-5172	Anti-HDAC8 Mouse mAb	WB	H
	PTM-6006	Anti-HDAC10 Mouse mAb	WB/ICC/IF	H/R
	PTM-5021	Anti-SIRT1 Mouse mAb	WB/IHC-P/ICC/IF	H/M
	PTM-6043	Anti-SIRT2 Mouse mAb	WB/IHC-P/ICC/IF	H
	PTM-6462	Anti-SIRT3 Rabbit mAb	WB	H
	PTM-7223	Anti-SIRT5 Rabbit mAb	WB/IHC-P	H/M/R
Histone acyltrans-ferase	PTM-6658	Anti-SIRT6 Rabbit mAb	WB	H/M/R
	PTM-7231	Anti-SIRT7 Rabbit mAb	WB	H/R
	PTM-5115	Anti-GCN5 Mouse mAb	WB/ICC/IF	H/M/R
	PTM-5195	Anti-HAT1 Mouse mAb	WB/IHC-P/ICC/IF	H/M/R
	PTM-5711	Anti-PCAF Rabbit mAb	WB	H
	PTM-5281	Anti-CBP Rabbit mAb	WB/ICC/IF	H/R

About Us

PTM BIO provides the world's most comprehensive PTM antibody portfolio, covering 25 modification types and over 400+ PTM products. PTM BIO antibodies have enabled groundbreaking discoveries of novel histone marks such as lysine lactylation, succinylation, crotonylation, etc.