

H3K4me2 Recombinant Polyclonal Antibody, ChIP-Verified

Product Details

Size	100 µg
Species Reactivity	Human, Yeast
Published Species	Mouse, Human
Host/Isotype	Rabbit / IgG
Expression system	Expi293
Class	Recombinant Polyclonal
Type	Antibody
Conjugate	Unconjugated
Immunogen	Methylated peptide (Lys4) corresponding to human Histone H3 (aa 2-10)
Form	Liquid
Concentration	0.5 mg/mL
Purification	Protein A
Storage buffer	PBS, pH 7.2
Contains	0.09% sodium azide
Storage conditions	Store at 4°C short term. For long term storage, store at -20°C, avoiding freeze/thaw cycles.
RRID	AB_2532765

Applications	Tested Dilution	Publications
Western Blot (WB)	0.5-1 µg/mL	1 Publication
Immunocytochemistry (ICC/IF)	1 µg/mL	-
ChIP assay (ChIP)	1-5 µg	1 Publication
Peptide array (Array)	0.25 µg/mL	-
CUT&RUN (C&R)	1:100	-

Product Specific Information

Recombinant rabbit polyclonal antibodies are unique offerings from Thermo Fisher Scientific. They are comprised of a selection of multiple different recombinant monoclonal antibodies, providing the best of both worlds - the sensitivity of polyclonal antibodies with the specificity of monoclonal antibodies - all delivered with the consistency only found in a recombinant antibody. While functionally the same as a polyclonal antibody - recognizing multiple epitope sites on the target and producing higher detection sensitivity for low abundance targets - a recombinant rabbit polyclonal antibody has a known mixture of light and heavy chains. The exact population can be produced in every lot, circumventing the biological variability typically associated with polyclonal antibody production.

H3K4me2 Antibody (710796) in WB

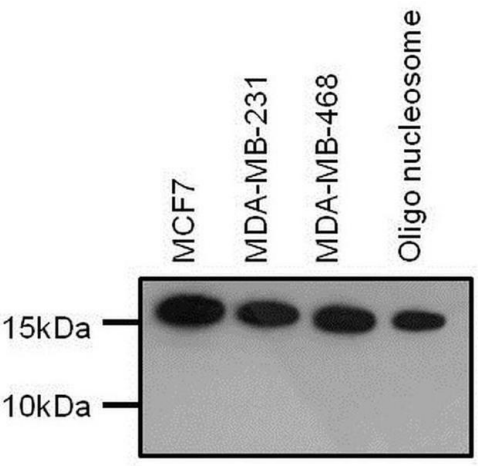
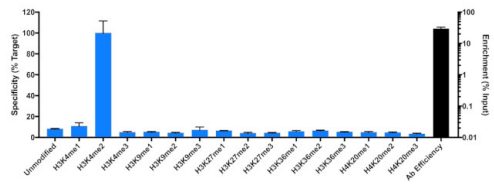
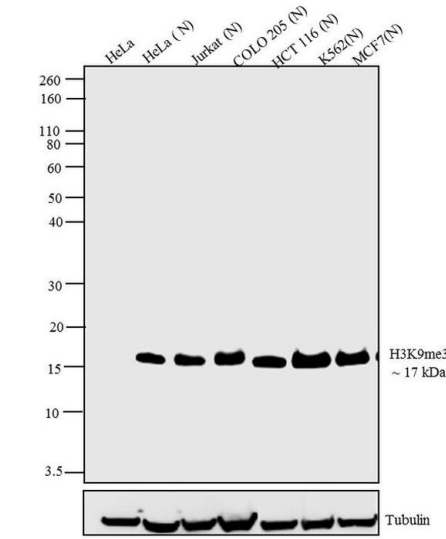
Western blot analysis was performed on whole cell extract (30 µg lysate) of HeLa (lane1), HeLa nuclear lysate (lane2), Jurkat nuclear lysate (lane3), Colo 205 nuclear lysate (lane4), HCT 116 nuclear lysate (lane 5), K562 nuclear lysate (lane 6) and MCF7 nuclear lysate (lane 7). The blots were probed with Anti-Histone H3K4me2 Recombinant Rabbit Polyclonal Antibody (Product # 710796, 0.5-1 µg/mL) and detected by chemiluminescence using Goat anti-Rabbit IgG (Heavy Chain) Superclonal Secondary Antibody, HRP conjugate (Product # A27036, 0.4 µg/mL, 1:2500 dilution). A clear 17kDa band corresponding to Histone H3K4me2 was observed across cell lines tested. Known quantity of protein samples were electrophoresed using Novex®NuPAGE®4-12% Bis-Tris gel (Product # NP0321BOX), XCell SureLock Electrophoresis System (Product # EI0002), and Novex® Sharp Pre-Stained Protein Standard (Product # LC5800). Resolved proteins were then transferred onto a nitrocellulose membrane with iBlot® Dry Blotting System (Product # IB21001). The membrane was probed with the relevant primary and secondary Antibody following blocking with 5% skimmed milk. Chemiluminescent detection was performed using Pierce™ ECL Western blotting Substrate (Product # 32106).

H3K4me2 Antibody (710796)

Antibody specificity was demonstrated by detection of enrichment of the targeted histone modification using SNAP-ChIP™ Spike-in, a proprietary technology developed by [EpiCypher™](https://www.epicypher.com). SNAP-ChIP™ spike-in was performed using H3K4me2 Recombinant Rabbit Polyclonal Antibody (Product # 710796) and H3K4me2 was enriched compared to the other histone modifications in the SNAP-ChIP™ K-MetStat Panel (Product # A47356). {SNAP-ChIP}

H3K4me2 Antibody (710796) in WB

Western blot analysis of Histone H3K4me2 was performed by loading 1 µg of from MCF7 (lane 1), MDA-MB -231 (lane 2) and MDA-MB-468 (lane 3) HCl extracted histones and 1 µg of HeLa oligo-nucleosomes (lane 4). 4 µL Page-Ruler Prestained Protein Ladder (Product # 26619) per well was loaded onto a 14% Tris-HCl polyacrylamide gel. Proteins were transferred to a nitrocellulose membrane and blocked with 5% Milk/PBST for at least 1 hour at room temperature. Histone H3K4me2 antibody (Product # 710796) was diluted 1:3000 in blocking buffer overnight at 4°C on a rocking platform, followed by a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:10,000 for at least 1 hour. Chemiluminescent detection was performed using SuperSignal West Pico (Product # 34077) and H3K4me2 was detected approximately 17 kDa. Data courtesy of Dr. Wei Xu's lab.



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Western Blot (1)

Communications biology	Year 2020
Mutually suppressive roles of KMT2A and KDM5C in behaviour, neuronal structure, and histone H3K4 methylation.	Species Mouse
Authors: Vallianatos CN,Raines B,Porter RS,Bonefas KM,Wu MC,Garay PM,Collette KM,Seo YA,Dou Y,Keegan CE,Tronson NC,Iwase S	Dilution 1:1000

ChIP assay (1)

Molecular cell	Year 2018
Examining the Roles of H3K4 Methylation States with Systematically Characterized Antibodies.	Species Human Mouse
Authors: Shah RN,Grzybowski AT,Cornett EM,Johnstone AL,Dickson BM,Boone BA,Cheek MA,Cowles MW,Maryanski D,Meiners MJ,Tiedemann RL,Vaughan RM,Arora N,Sun ZW,Rothbart SB,Keogh MC,Ruthenburg AJ	Dilution 3 µg

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