Phospho-RNA pol II CTD (Ser5) Monoclonal Antibody (4H8)

Product Details	
Size	100 µg
Species Reactivity	Human, Mouse, Yeast
Published Species	Human
Host/Isotype	Mouse / IgG1
Class	Monoclonal
Type	Antibody
Clone	4H8
Conjugate	Unconjugated
Immunogen	Chemically synthesized phospho-ser 5 YSPTSpPS (Human).
Form	Liquid
Concentration	1 mg/mL
Purification	Protein G
Storage buffer	PBS
Contains	no preservative
Storage conditions	-20°C
RRID	AB_1018366

Applications	Tested Dilution	Publications
Western Blot (WB)	1:1,000-1:20,000	3 Publications
Immunohistochemistry (Paraffin) (IHC (P))	1:10-1:100	-
Immunocytochemistry (ICC/IF)	1:50 - 1:100	-
ELISA (ELISA)	1:100-1:2,000	-
Immunoprecipitation (IP)	1-5 µg	2 Publications
ChIP assay (ChIP)	1-10 µL	2 Publications
RNA Immunoprecipitation (RIP)	Assay-dependent	-
CUT&RUN (C&R)	Assay-dependent	-

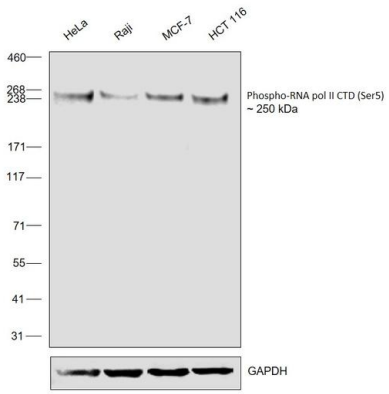
Product Specific Information

MA1-46093 reacts with DNA-directed RNA Polymerase II Largest Subunit in human, yeast and mouse samples. Expected to cross-react with Drosophilia melanogaster, hamster, S. pombe, and Arabidopsis thaliana due to sequence homology.

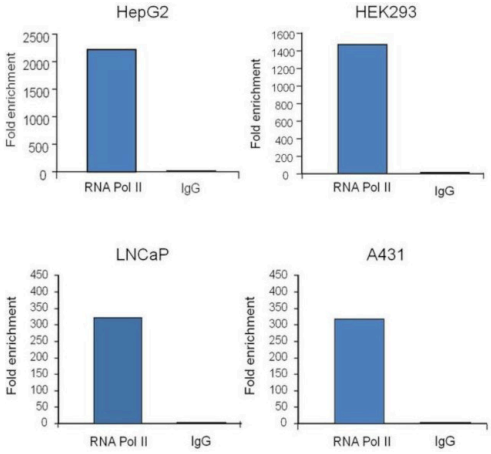
MA1-46093 has been successfully used in Western Blot, Chromatin Immunoprecipitation, ELISA, Immunocytochemistry /Immunofluorescence, IHC (P) and Immunoprecipitation applications.

The MA1-46093 immunogen is 10 repeats of synthetic peptide YSPTSPS using chemically synthesized phospho-Ser 5 YSPTSpPS (Human). This antibody detects both the phosphorylated and non-phosphorylated forms.

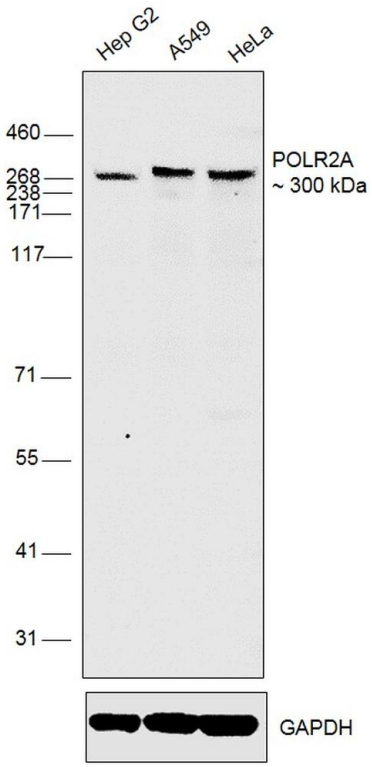
Product Images For Phospho-RNA pol II CTD (Ser5) Monoclonal Antibody (4H8)



Phospho-RNA pol II CTD (Ser5) Antibody (MA1-46093) in WB
Western blot was performed using Anti-Phospho-RNA pol II CTD (Ser5) Monoclonal Antibody (4H8) (Product # MA1-46093) and a 250 kDa band corresponding to -Phospho-RNA pol II CTD (Ser5) was observed across cell lines tested. Nuclear enriched extracts (40 µg lysate) of HeLa (Lane 1), Raji (Lane 2), MCF7 (Lane 3) and HCT 116 (Lane 4) were electrophoresed using NuPAGE™ 3-8% Tris-Acetate Protein Gel (Product # EA0378BOX). Resolved proteins were equilibrated with 20% Ethanol and then transferred onto a nitrocellulose membrane (Product # IB23002) by iBlot® 2 Dry Blotting System (Product # IB21001). The blot was probed with the primary antibody (1:1000 dilution) and detected by chemiluminescence with Goat anti-Mouse IgG (H+L) Superclonal™ Recombinant Secondary Antibody, HRP (Product # A28177,1: 20000 dilution using the iBright™ FL1500 Imaging System (Product # A44115). Chemiluminescent detection was performed using SuperSignal™ West Pico PLUS Chemiluminescent Substrate (Product # 34580).



Phospho-RNA pol II CTD (Ser5) Antibody (MA1-46093) in ChIP
Chromatin immunoprecipitation analysis (ChIP) of RNA Polymerase II subunit B1 binding to the GAPDH promoter was performed using cross-linked chromatin from the indicated cell lines. Immunoprecipitation was performed using the Pierce Magnetic ChIP kit (Product # 26157) with 10 µg of a RNA Polymerase II monoclonal antibody (Product # MA1-46093) for HepG2-derived chromatin, or 2.5 µg for A431-, HEK293- and LNCaP-derived chromatin. Quantitative real-time PCR data was obtained using Thermo Scientific™ Luminaris™ Color HiGreen qPCR Master Mix, and primers (5'-TACTAGCGGTTTTACGGGCG, 3' TCGAACAGGAGGAGCAGAGAGCGA) flanking the human GAPDH promoter, proximal to the start site of transcription. The reaction was performed on the Thermo Scientific™ PikoReal™ Real-Time qPCR system. Quantitation of immunoprecipitated GAPDH promoter sequence is presented as fold enrichment of the RNA Polymerase II monoclonal antibody versus non-specific IgG. Note: This antibody can be used as a positive control for ChIP experiments.



Phospho-RNA pol II CTD (Ser5) Antibody (MA1-46093) in WB
Western blot was performed using Anti-POLR2A Monoclonal Antibody (Product # MA1-46093) and ~300kDa band corresponding to POLR2A was observed across cell lines tested. Whole cell extracts (40 µg lysate) of Hep G2 (Lane 1), A549 (Lane 2) and HeLa (Lane 3) were electrophoresed using NuPAGE® 10% Bis-Tris gel (Product # NP0302BOX). Resolved proteins were then transferred onto a nitrocellulose membrane (Product # LC2001) by XCell SureLock® Mini-Cell and XCell II® Blot Module (Product # EI0002). The blot was probed with the primary antibody (1:2000 dilution) and detected by chemiluminescence with Goat anti-Mouse IgG (H+L) Superclonal™ Recombinant Secondary Antibody, HRP (Product # A28177, 1:4000 dilution) using the iBright FL 1000 (Product # A32752). Chemiluminescent detection was performed using Novex® ECL Chemiluminescent Substrate Reagent Kit (Product # WP20005).

View more figures on thermofisher.com

7 References

Western Blot (3)

Cell discovery

Loss of ASXL1 in the bone marrow niche dysregulates hematopoietic stem and progenitor cell fates.

"Published figure using POLR2A monoclonal antibody (Product # MA1-46093) in Immunoprecipitation"

Authors: Zhang P,Chen Z,Li R,Guo Y,Shi H,Bai J,Yang H,Sheng M,Li Z,Li J,Chen S,Yuan W,Cheng T,Xu M,Zhou Y,Yang FC

Year
2020

Cancers

TRAIL Induces Nuclear Translocation and Chromatin Localization of TRAIL Death Receptors.

"Published figure using Phospho-RNA pol II CTD (Ser5) monoclonal antibody (Product # MA1-46093) in Western Blot"

Authors: Mert U,Adawy A,Scharff E,Teichmann P,Willms A,Haselmann V,Colmorgen C,Lemke J,von Karstedt S,Fritsch J,Trauzold A

Year
2019

Species
Human

View more WB references on thermofisher.com

Immunoprecipitation (2)

Nature aging

Telomerase Reverse Transcriptase Preserves Neuron Survival and Cognition in Alzheimer's Disease Models.

"MA1-46093 was used in Immunoprecipitation to provide genetic proof-of-concept for somatic TERT gene activation therapy in attenuating AD progression including cognitive decline."

Authors: Shim HS,Horner JW,Wu CJ,Li J,Lan ZD,Jiang S,Xu X,Hsu WH,Zal T,Flores II,Deng P,Lin YT,Tsai LH,Wang YA,DePinho RA

Year
2021

Species
Human

Dilution
1:1000

Cell discovery

Loss of ASXL1 in the bone marrow niche dysregulates hematopoietic stem and progenitor cell fates.

"Published figure using POLR2A monoclonal antibody (Product # MA1-46093) in Immunoprecipitation"

Authors: Zhang P,Chen Z,Li R,Guo Y,Shi H,Bai J,Yang H,Sheng M,Li Z,Li J,Chen S,Yuan W,Cheng T,Xu M,Zhou Y,Yang FC

Year
2020

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ChIP (2)