

Datasheet for 200-301-V00**POL II phospho S2 Antibody****Overview**

Description:	Anti-POL II pS2 (MOUSE) Monoclonal Antibody - 200-301-V00
Item No.:	200-301-V00
Size:	50 µg
Applications:	ChIP, ELISA, IF, WB
Reactivity:	Human
Host Species:	Mouse

Product Details

Background:	RNA polymerase II (pol II) is a key enzyme in the regulation and control of gene transcription. It is able to unwind the DNA double helix, synthesize RNA, and proofread the result. Pol II is a complex enzyme, consisting of 12 subunits, of which the B1 subunit (UniProt/Swiss-Prot entry P24928) is the largest. Together with the second largest subunit, B1 forms the catalytic core of the RNA polymerase II transcription machinery. Anti-Pol II S2p Antibody is ideal for research in Gene Expression, Transcription, and Genetics.
Synonyms:	DNA-directed RNA polymerase II subunit RPB1, RNA polymerase II subunit B1, DNA directed RNA polymerase II subunit A, DNA-directed RNA polymerase III largest subunit, RNA-directed RNA polymerase II subunit RPB1
Host Species:	Mouse
Clonality:	Monoclonal
Format:	IgG1

Target Details

Gene Name:	POLR2A
Reactivity:	Human
PTM Specificity:	Phosphorylation
Immunogen Type:	Conjugated Peptide

Immunogen:	Anti-Pol II S2p Antibody was produced in mice by repeated immunization with the YSPTSPS repeat in the B1 subunit of RNA polymerase II phosphorylated at Ser2 of the repeated sequence.
Purity/Specificity:	Anti-Pol II pS2 Antibody was purified by Protein A chromatography. This antibody is specific for Pol II protein phosphorylated Ser2. Cross-reactivity with Pol II pS2 from other sources has not been determined.
Relevant Links:	• UniProtKB - P24928 • GeneID - 5430 • NCBI - NP_000928.1

Application Details

Tested Applications:	ChIP, ELISA, IF, WB
Application Note:	Anti-Pol II pS2 Antibody is tested for Chromatin Immunoprecipitation Sequencing, Chromatin Immunoprecipitation, ELISA, Immunofluorescence and Western Blots. Specific conditions for reactivity should be optimized by the end user. Expect a band approximately 225 kDa in the appropriate cell lysate or extract.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
ChIP:	1 µg/ChIP
ELISA:	1:3,000
IF:	1:500
WB:	1:1,000

Formulation

Physical State:	Liquid (sterile filtered)
Concentration:	1.0 µg/µl by UV absorbance at 280 nm
Buffer:	0.01 M Sodium Phosphate, 0.25 M Sodium Chloride, pH 7.2
Preservative:	0.05% (w/v) Sodium Azide
Stabilizer:	None

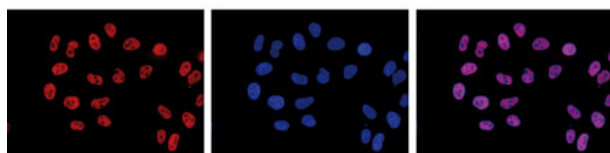
Shipping & Handling

Shipping Condition:	Dry Ice
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Storage Condition: Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.

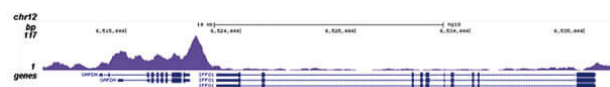
Expiration: Expiration date is one (1) year from date of receipt.

Images



Immunofluorescence Microscopy

Immunofluorescence Microscopy results of Mouse anti-Pol II S2p antibody. Tissue: HeLa cells. Fixation: methanol. Block: PBS/TX-100 containing 5% normal goat serum and 1% BSA. Primary antibody: Pol II S2p antibody at 1:500 for 1 hr at RT (left). Secondary antibody: anti-Mouse Alexa594 secondary antibody at 1:10,000 for 45 min at RT. Staining: Pol II S2p antibody as red fluorescent signal (left), DAPI blue (middle), merge of the two staining (right).

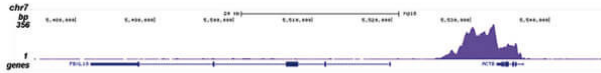


ChIP

ChIP was performed on sheared chromatin from 1 million HeLaS3 cells using 1 µg of the antibody against Pol II S2p. The IP'd DNA was subsequently analyzed on an Illumina Genome Analyzer. The 36 bp tags were aligned to the human genome using the ELAND algorithm. Fig 4 shows the peak distribution along the complete sequence, a 150 kb region of the X-chromosome (Fig 5), and in a two genomic regions surrounding the GAPDH (Fig 6) and ACTB positive control genes (Fig 7).

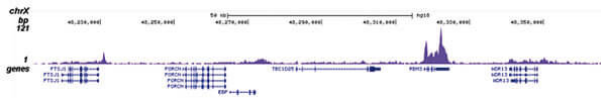
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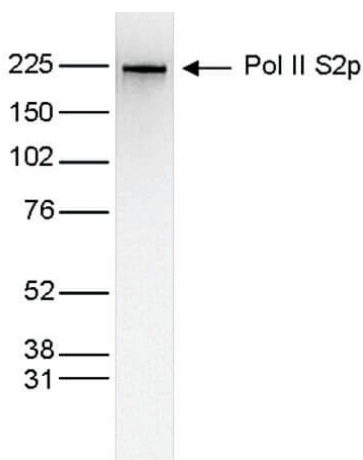
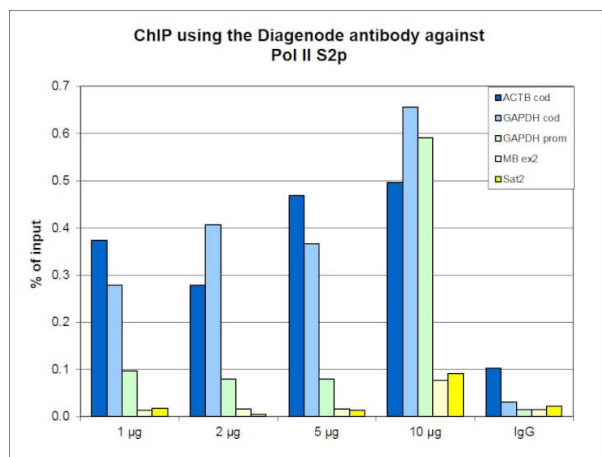
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ChIP

Chromatin Immunoprecipitation for Mouse Anti-Pol II S2p Antibody. ChIP was performed using sheared chromatin from 1 million HeLa cells. A titration consisting of 1, 2, 5 and 10 µg of antibody per experiment was analyzed. IgG, exon 2 of the inactive myoglobin gene, and Sat2 satellite was used as a negative IP control, GAPDH and ACTB genes, used as positive controls. Figure shows the recovery, expressed as a % of input (the relative amount of IP DNA compared to input DNA after qPCR analysis).

Western Blot

Western Blot results of Mouse anti-Pol II S2p antibody. Lane 1: HeLa Nuclear Extracts 25µg. Primary antibody: Mouse anti-Pol II S2p antibody at 1:1000 overnight at 4°C. Secondary antibody: Peroxidase anti-mouse secondary antibody at 1:10,000 for 45 min at RT. Block: TBS-Tween containing 5% BLOTTO. Predicted/Observed size: ~217 kDa for Mouse Pol II S2p.

Disclaimer

This product is for research use only and is not intended for therapeutic or diagnostic applications. Please contact a technical service representative for more information. All products of animal origin manufactured by Rockland Immunochemicals are derived from starting materials of North American origin. Collection was performed in United States Department of Agriculture (USDA) inspected facilities and all materials have been inspected and certified to be free of disease and suitable for exportation. All properties listed are typical characteristics and are not specifications. All suggestions and data are offered in good faith but without guarantee as conditions and methods of use of our products are beyond our control. All claims must be made within 30 days following the date of delivery. The prospective user must determine the suitability of our materials before adopting them on a commercial scale. Suggested uses of our products are not recommendations to use our products in violation of any patent or as a license under any patent of Rockland Immunochemicals, Inc. If you require a commercial license to use this material and do not have one, then return this material, unopened to: Rockland Inc., P.O. BOX 5199, Limerick, Pennsylvania, USA.