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Datasheet for 200-301-U99

POL II Antibody

Overview

Description:	Anti-POL II (MOUSE) Monoclonal Antibody - 200-301-U99
Item No.:	200-301-U99
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 is the largest. Together with the second largest subunit, B1 forms the catalytic core of the RNA polymerase II transcription machinery. Anti-Pol II 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, POLR2, RNAPII
Host Species:	Mouse
Clonality:	Monoclonal
Format:	IgG1

Target Details

Gene Name:	POLR2A
Reactivity:	Human
Immunogen Type:	Conjugated Peptide
Immunogen:	Anti-Pol II Antibody was produced in mice by repeated immunization with the YSPTSPS repeat in the B1 subunit of RNA polymerase II.

Purity/Specificity:	Anti-Pol II Antibody was purified by Protein A chromatography. Cross-reactivity with Pol II 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 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 mg/ml 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

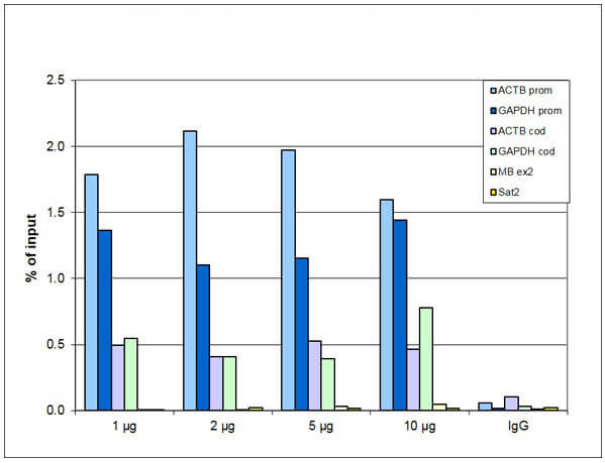
Shipping & Handling

Shipping Condition:	Dry Ice
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.

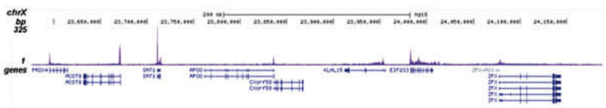
Expiration: Expiration date is one (1) year from date of receipt.

Images

Immunofluorescence Microscopy
Immunofluorescence Microscopy results of Mouse anti-Pol II antibody. Tissue: HeLa cells. Fixation: methanol. Block: PBS/TX-100 containing 5% normal goat serum and 1% BSA. Primary antibody: Pol II 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 antibody as red fluorescent signal (left), DAPI blue (middle), merge of the two staining (right).

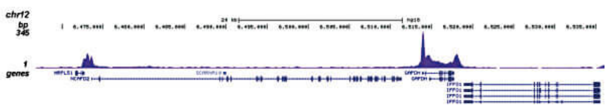


ChIP
Chromatin Immunoprecipitation results for Mouse Anti-Pol II Antibody. ChIP was performed on sheared chromatin from 1 million HeLa cells. A titration consisting of 1, 2, 5 and 10 µg of antibody experiment was analyzed. IgG, exon 2 of the inactive myoglobin gene, and Sat2 satellite was used as a negative 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).



ChIP

ChIP was performed on sheared chromatin from 1 million HeLaS3 cells using 1 µg of anti-Pol II. The IP'd DNA was 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 400 kb region of the X-chromosome (Fig 5), in a two genomic regions surrounding the GAPDH (Fig 6) and ACTB positive control genes (Fig 7).



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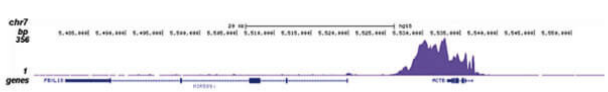

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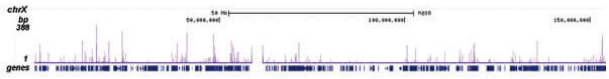

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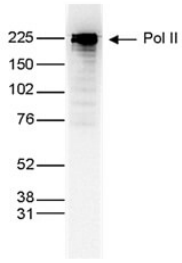

Western Blot

Western Blot results of Mouse anti-Pol II antibody. Lane 1: 25 µg HeLa nuclear extracts. Primary antibody: Mouse anti-Pol II 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 overnight at 4°C. Predicted/Observed size: ~217 kDa for Mouse Pol II.

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