

Datasheet for ABIN6972642

anti-Rpb1 CTD antibody (pSer5)

4 Images

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Overview

Quantity:	100 µg
Target:	Rpb1 CTD
Binding Specificity:	pSer5
Reactivity:	Human, Mouse
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This Rpb1 CTD antibody is un-conjugated
Application:	Western Blotting (WB), Chromatin Immunoprecipitation (ChIP), ChIP DNA-Sequencing (ChIP-seq)

Product Details

Immunogen:	This RNA pol II CTD phospho Ser5 antibody was raised against synthetic peptide containing the RNA Pol II heptad repeat consensus sequence phosphorylated at serine 5.
Isotype:	IgG
Characteristics:	RNA pol II (RNA polymerase II) is responsible for synthesizing messenger RNA in eukaryotes. RNA pol II contains a carboxy terminal domain composed of heptapeptide repeats that are essential for polymerase activity. These repeats contain serine and threonine residues that are phosphorylated in actively transcribing RNA polymerase. In addition, RNA pol II, in combination with several other polymerase subunits, form the DNA binding domain of the polymerase, a groove in which the DNA template is transcribed into RNA. During the transcription cycle, the CTD of the large subunit of RNA pol II is reversibly phosphorylated. RNA pol II containing unphosphorylated CTD is recruited to the promoter, whereas the hyperphosphorylated CTD

Product Details

form is involved in active transcription. Phosphorylation occurs at two sites within the heptapeptide repeat, at Serine 5 and Serine 2. RNA pol II Serine 5 phosphorylation is confined to promoter regions and is necessary for the initiation of transcription. RNA pol II CTD phospho Ser5 antibody (pAb) was raised in a Rabbit host. It has been validated for use in Chromatin Immunoprecipitation, ChIP-Seq and Western blot, it has been shown to react with Human and Mouse samples, but it is predicted that it will react with a wide range of sample types.

Purification: Protein A Chromatography

Target Details

Target: Rpb1 CTD

Alternative Name: RNA pol II CTD ([Rpb1 CTD Products](#))

Molecular Weight: 210 kDa

NCBI Accession: [NP_000928](#)

Application Details

Application Notes: Optimal working dilution should be determined by the investigator.

Restrictions: For Research Use only

Handling

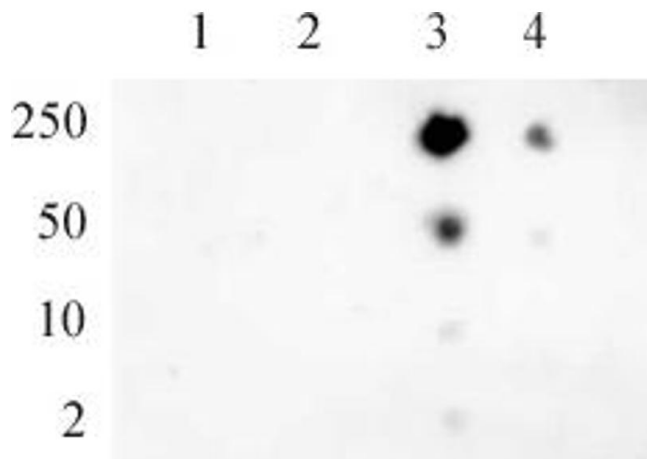
Buffer: Purified IgG in PBS (pH 7.5) with 30 % glycerol and 0.035 % sodium azide.

Preservative: Sodium azide

Precaution of Use: This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.

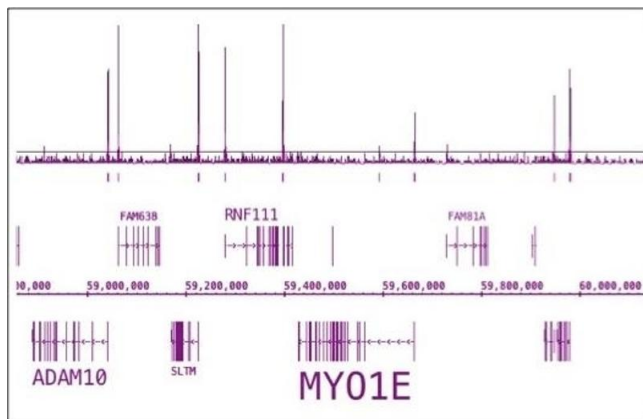
Storage: -20 °C

Storage Comment: Avoid repeated freeze/thaw cycles by aliquoting items into single-use fractions for storage at -20°C for up to 2 years. Keep all reagents on ice when not in storage.



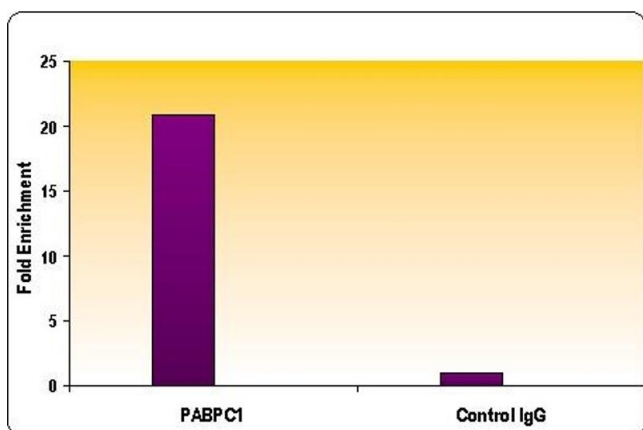
Dot Blot

Image 1. RNA pol II CTD phospho Ser5 pAb tested by dot blot analysis. Dot blot analysis was used to confirm the specificity of RNA pol II CTD phospho Ser5 antibody for phospho-Ser5 of the RNA Pol II C-terminal domain heptad repeat. Modified and unmodified peptides were spotted onto PVDF and probed with the antibody at a dilution of 0.2 µg/mL. Decreasing amounts of peptide were spotted in each row. Lane 1: Peptide phosphorylated at CTD repeat serine 2. Lane 2: Unmodified CTD repeat serine 2 peptide. Lane 3: Peptide phosphorylated at CTD repeat serine 5. Lane 4: Unmodified CTD repeat serine 5 peptide.



ChIP DNA-Sequencing

Image 2. RNA pol II CTD phospho Ser5 antibody (pAb) tested by ChIP-Seq. ChIP was performed using the ChIP-IT High Sensitivity Kit with chromatin from 2.3 million HL-60 cells and 4 µL of antibody. ChIP DNA was sequenced on the Illumina HiSeq and 26 million sequence tags were mapped to identify RNA pol II phospho Ser5 binding. The image shows a 1.2 million base pair region on chromosome 15 with the expected enrichment at gene promoters.



Chromatin Immunoprecipitation

Image 3. RNA pol II CTD phospho Ser5 antibody tested by ChIP analysis. Chromatin IP performed using the ChIP-IT Express Kit and HeLa Chromatin (1.5 x 10⁶ cell equivalents per ChIP) using 10 µg of RNA pol II CTD phospho Ser5 antibody or the equivalent amount of rabbit IgG as a negative control. Real time, quantitative PCR (RT-qPCR) was performed on DNA purified from each of the ChIP reactions using a primer pair specific for the PABPC1 gene. Data are presented as Fold Enrichment of the ChIP antibody signal versus the negative control IgG (arbitrarily assigned a value of 1) using the ddCT method.

Images

Please check the [product details page](#) for more images. Overall 4 images are available for ABIN6972642.