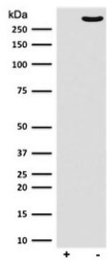
Phospho-POLR2A Antibody (pS2) [clone AH-16] (RQ4505)

Catalog No.	Formulation	Size
RQ4505	Antibody in PBS with 0.02% sodium azide, 50% glycerol and 0.4-0.5mg/ml BSA	100 ul

Bulk quote request

Availability	1-2 weeks
Species Reactivity	Human
Format	Purified
Host	Rabbit
Clonality	Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	AH-16
Purity	Protein A affinity
UniProt	P24928
Localization	Nucleus
Applications	Western blot: 1:500-1:2000
Limitations	This phospho-POLR2A antibody is available for research use only.



Western blot testing of lambda phosphatase treated and untreated human MCF7 cell lysate with phospho-POLR2A antibody. Predicted molecular weight 200-220 kDa but commonly observed at 250-270 kDa.

Description

DNA-dependent RNA polymerase catalyzes the transcription of DNA into RNA using the four ribonucleoside triphosphates as substrates. Largest and catalytic component of RNA polymerase II which synthesizes mRNA precursors and many functional non-coding RNAs. Forms the polymerase active center together with the second largest subunit. Pol II is the central component of the basal RNA polymerase II transcription machinery. It is composed of mobile elements

that move relative to each other. RPB1 is part of the core element with the central large cleft, the clamp element that moves to open and close the cleft and the jaws that are thought to grab the incoming DNA template. At the start of transcription, a single-stranded DNA template strand of the promoter is positioned within the central active site cleft of Pol II. A bridging helix emanates from RPB1 and crosses the cleft near the catalytic site and is thought to promote translocation of Pol II by acting as a ratchet that moves the RNA-DNA hybrid through the active site by switching from straight to bent conformations at each step of nucleotide addition. During transcription elongation, Pol II moves on the template as the transcript elongates. Elongation is influenced by the phosphorylation status of the C-terminal domain (CTD) of Pol II largest subunit (RPB1), which serves as a platform for assembly of factors that regulate transcription initiation, elongation, termination and mRNA processing. Acts as an RNA- dependent RNA polymerase when associated with small delta antigen of Hepatitis delta virus, acting both as a replicate and transcriptase for the viral RNA circular genome. .

Application Notes

Optimal dilution of the phospho-POLR2A antibody should be determined by the researcher.

Immunogen

The amino acids surrounding phosphorylated Serine at position 2 were used as the immunogen for the phospho-POLR2A antibody.

Storage

After reconstitution, the phospho-POLR2A antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

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