

## Datasheet: VMA00909

|                      |                                   |
|----------------------|-----------------------------------|
| <b>Description:</b>  | HUMAN ANTI RNA POL II CTD (pSer5) |
| <b>Specificity:</b>  | RNA POL II CTD (pSer5)            |
| <b>Other names:</b>  | RPB1                              |
| <b>Format:</b>       | Purified                          |
| <b>Product Type:</b> | PrecisionAb Monoclonal            |
| <b>Clone:</b>        | AbD37525                          |
| <b>Isotype:</b>      | HuCAL Fab bivalent                |
| <b>Quantity:</b>     | 100 µl                            |

## Product Details

### Applications

This product has been reported to work in the following applications. This information is derived from testing within our laboratories, peer-reviewed publications or personal communications from the originators. Please refer to references indicated for further information. For general protocol recommendations, please visit [www.bio-rad-antibodies.com/protocols](http://www.bio-rad-antibodies.com/protocols).

|                  | Yes | No | Not Determined | Suggested Dilution |
|------------------|-----|----|----------------|--------------------|
| Western Blotting | ▪   |    |                | 1/1000             |

**The PrecisionAb label is reserved for antibodies that meet the defined performance criteria within Bio-Rad's ongoing antibody validation programme. Click [here](#) to learn how we validate our PrecisionAb range.** Where this product has not been tested for use in a particular technique this does not necessarily exclude its use in such procedures. Further optimization may be required dependent on sample type.

### Target Species

Human

### Product Form

A bivalent human recombinant Fab (lambda light chain) selected from the HuCAL® phage display library, expressed in *E. coli*. This Fab fragment is bivalent by dimerization of an inactive variant of the bacterial alkaline phosphatase fusion protein. The antibody is tagged with a DYKDDDDK tag and a HIS-tag (HHHHHH) at the C-terminus of the antibody heavy chain. This product is supplied as a liquid.

### Preparation

Prepared by affinity chromatography

### Source

*E. coli*

### Buffer Solution

Phosphate buffered saline

### Preservative

0.01% Thiomersal

## Stabilisers

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**Approx. Protein Concentrations**      Antibody concentration 0.5 mg/ml

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**Immunogen**      Phospho specific-peptide corresponding to residues surrounding serine 5 of human RPB1 and conjugated to BSA and human transferrin

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## External Database Links

**UniProt:**  
[P24928](#)      [Related reagents](#)

**Entrez Gene:**  
[5430](#)      POLR2A      [Related reagents](#)

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**Synonyms**      POLR2

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**Specificity**      **Human anti RNA Pol II CTD (pSer5) antibody** is a recombinant Fab antibody fragment in the format Fab-Max-FH with specificity for DNA-directed RNA polymerase II subunit RPB1, otherwise known as RNAP II, RNA Pol II and Pol II, when phosphorylated at serine 5. Pol II forms part of a highly-conserved initiator complex for transcription of gene transcription, directing RNA synthesis with the help of general initiation factors ([Sainsbury et al. 2015](#)). In fact, Pol II is able to transcribe all protein-coding genes and most non-coding RNA genes in eukaryotes, providing an essential role ([Kuehner et al. 2011](#)). Pol II undergoes dynamic post-translational modification at its carboxy-terminal domain (CTD) in order to regulate transcription ([Harlen and Churchman 2017](#)). The CTD contains the residues Ser2, Ser 5 and Ser 7 within multiple heptad repeats. Phosphorylation at these targets regulates the activities of the CTD, which include coupling transcription and processing of nascent RNA, and transcription elongation and termination ([Hsin and Manley 2012](#)).

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**Western Blotting**      Human anti RNA Pol II CTD (pSer5) detects a band of approximately 299 kDa in Hela cell lysates

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**Storage**      This product is shipped at ambient temperature. It is recommended to aliquot and store at -20°C on receipt. When thawed, aliquot the sample as needed. Keep aliquots at 2-8°C for short term use (up to 4 weeks) and store the remaining aliquots at -20°C.

Avoid repeated freezing and thawing as this may denature the antibody. Storage in frost-free freezers is not recommended.

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**Guarantee**      12 months from date of despatch

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**Acknowledgements**      This product and/or its use is covered by claims of U.S. patents, and/or pending U.S. and non-U.S. patent applications owned by or under license to Bio-Rad Laboratories, Inc. See [bio-rad.com/en-us/trademarks](http://bio-rad.com/en-us/trademarks) for details.

His-tag is a registered trademark of EMD Biosciences

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**Health And Safety  
Information**

Material Safety Datasheet documentation #10094 available at:  
<https://www.bio-rad-antibodies.com/SDS/VMA00909>  
10094

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**Regulatory**

For research purposes only

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**Technical Advice**

Technical advice - Recommended protocols and further information about HuCAL recombinant antibody technology can be found in the [HuCAL Antibodies Technical Manual](#)

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