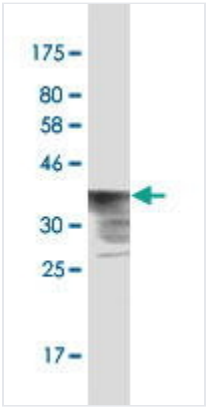
POLR2A Antibody – Mouse Monoclonal

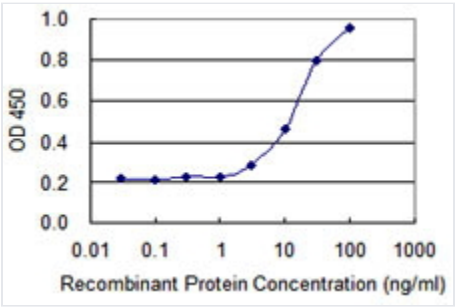
PRODUCT OVERVIEW

Product Name	POLR2A, Monoclonal Antibody
Full Product Name	POLR2A (DNA-directed RNA Polymerase II Subunit RPB1, RNA Polymerase II Subunit B1, DNA-directed RNA Polymerase II Subunit A, DNA-directed Polymerase III Largest Subunit, RNA-directed RNA Polymerase II Subunit RPB1, POLR2, MGC75453) (Biotin)
Product Gene Name	anti-POLR2A antibody
Clonality	Monoclonal
Isotype	IgG2b,k
Clone Number	1F17
Host	Mouse
Species Reactivity	Human
Form/Format	Supplied as a liquid in PBS, pH 7.2. No preservative added. Labeled with Biotin.
Purity/Purification	Purified by Protein A Affinity Chromatography.
Specificity	Recognizes human POLR2A.
Preparation and Storage	Store product at 4 degree C if to be used immediately within two weeks. For long-term storage, aliquot to avoid repeated freezing and thawing and stor C. Aliquots are stable at -20 degree C for 12 months after receipt. Dilute required amount only prior to immediate use. Further dilutions can be made in maximum recovery of product, centrifuge the original vial after thawing and prior to removing the cap.
Molecular Weight	63,641 Da
OMIM	180660
3D Structure	ModBase 3D Structure for P24928
Immunogen	Partial recombinant corresponding to aa1-111 from human POLR2A (NP_000928) with GST tag. MW of the GST tag alone is 26kD.
Immunogen Sequence	MHGGGPPSGDSACPLRTIKRVQFGVLSPDELKRMSVTEGGIKYPETTEGGRPKLGGLMDPRQGVIERTGRCQTCAGNMTECPGHFGHIELAKPVFHVG
Conjugate	Biotin
Product Categories/Family for anti-POLR2A antibody	Antibodies; Enzymes; Polymerase
Applications Tested/Suitable for anti-POLR2A antibody	ELISA (EIA), Western Blot (WB)
Application Notes for anti-POLR2A antibody	Applications are based on unconjugated antibody.

Related Product Information for anti-POLR2A antibody	POLR2A (DNA-directed RNA Polymerase II subunit RPB1; also subunit A) is a 200-220kD member of the RNA polymerase beta-chain family of protein ubiquitously expressed and represents the largest subunit of RNA polymerase II, the catalytic mechanism for the synthesis of mRNA. Human POLR2A length. It contains an N-terminus with six RNA polymerase domains (aa15-1079), and a C-terminus (CTD) with 52 seven aa repeats (-YSPTSPS-) that platform for polymerase subunit interaction. When these sequences are hyperphosphorylated, this subunit is called RNA pol IIo; when hypophosphoryl becomes RNA pol IIa. Isoforms exist that show a 60aa substitution for aa1-95, a 24aa substitution for aa1-445, and an Arg substitution for aa1498-153 human and mouse POLR2A sequences differ by only one amino acid (Thr1856Ala).
Other Notes	Small volumes of anti-POLR2A antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If nece centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional apply.
Searchable Terms for POLR2A purchase	MBS6143652 is an antibody targeting POLR2A. Also known as POLR2A (DNA-directed RNA Polymerase II Subunit RPB1, RNA Polymerase II Subuni directed RNA Polymerase II Subunit A, DNA-directed RNA Polymerase III Largest Subunit, RNA-directed RNA Polymerase II Subunit RPB1, POLR2, M (Biotin). Reactive in Human. Host: Mouse.



Western Blot (WB) of anti-POLR2A antibody
Western Blot detection against Immunogen (37.84kD).



Testing Data of anti-POLR2A antibody
Detection limit for recombinant GST tagged POLR2A is 1ng/ml as a capture antibody.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for POLR2A. It may not necessarily be applicable to this product.

NCBI GI #	4505939
NCBI GeneID	5430
NCBI Accession #	NP_000928
UniProt Primary Accession #	P24928
UniProt Secondary Accession #	Q6NX41; A6NN93; B9EH88
UniProt Related Accession #	P24928
GenBank Nucleotide #	NM_000937
NCBI Official Full Name	DNA-directed RNA polymerase II subunit RPB1
NCBI Official Synonym Full Names	polymerase (RNA) II (DNA directed) polypeptide A, 220kDa
NCBI Official Symbol	POLR2A
NCBI Official Synonym Symbols	RPB1; RPO2; POLR2; POLRA; RPBh1; RPOL2; RpIILS; hsRPB1; hRPB220
UniProt Protein Name	DNA-directed RNA polymerase II subunit RPB1
UniProt Synonym Protein Names	DNA-directed RNA polymerase II subunit A; DNA-directed RNA polymerase III largest subunit; RNA-directed RNA polymerase II subunit RPB1
UniProt Gene Name	POLR2A
UniProt Synonym Gene Names	POLR2; RNA polymerase II subunit B1

UniProt Entry Name	RPB1_HUMAN
NCBI Protein Information	DNA-directed RNA polymerase II subunit RPB1; DNA-directed RNA polymerase II largest subunit, RNA polymerase II 220 kd subunit; DNA-directed RNA polymerase II subunit A; DNA-directed RNA polymerase III largest subunit; RNA polymerase II subunit B1; RNA-dir
UniProt Comments for POLR2A	POLR2A: 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 a 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. Component of the RNA polymerase II (Pol II) complex consisting of 12 subunits. The phosphorylated C-terminal domain interacts with FNBP3 and SYNCRIP. Interacts with SAFB/SAFB1. Interacts with CCNL1 and MYO1C. Interacts with CCNL2 and SFRS19. Component of a complex which is at least composed of HTATSF1/Tat-SF1, the P-TEFb complex components CDK9 and CCNT1, RNA polymerase II, SUPT5H, and NCL/nucleolin. Interacts with PAF1. Interacts (via C-terminus) with FTSJD2, CTDSP1 and SCAF8. Interacts via the phosphorylated C-terminal domain with WDR82 and with SETD1A and SETD1B only in the presence of WDR82. Interacts with ATF7IP. When phosphorylated at 'Ser-5', interacts with MEN1; the unphosphorylated form, or phosphorylated at 'Ser-2' does not interact. Interacts with DDX5. Belongs to the RNA polymerase beta' chain family. Protein type: Nucleotide Metabolism - purine; Nucleotide Metabolism - pyrimidine; Transferase; EC 2.7.7.6; Transcription initiation complex; EC 2.7.7.48 Chromosomal Location of Human Ortholog: 17p13.1 Cellular Component: nucleoplasm; nucleolus; DNA-directed RNA polymerase II, core complex; nucleus Molecular Function: protein binding; RNA-directed RNA polymerase activity; DNA binding; DNA-directed RNA polymerase activity; ubiquitin protein ligase binding; metal ion binding Biological Process: transcription from RNA polymerase II promoter; transcription initiation from RNA polymerase II promoter; viral reproduction; somatic stem cell maintenance; positive regulation of viral transcription; RNA splicing; DNA repair; positive regulation of RNA splicing; nuclear mRNA splicing, via spliceosome; mRNA capping; regulation of transcription, DNA-dependent; nucleotide-excision repair; transcription-coupled nucleotide-excision repair; RNA elongation from RNA polymerase II promoter; gene expression
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