RNA Polymerase II (POLR2E) Antibody – Mouse Monoclonal

PRODUCT OVERVIEW

Product Name	RNA Polymerase II (POLR2E), Monoclonal Antibody
Full Product Name	RNA Polymerase II Monoclonal Antibody
Product Gene Name	anti-POLR2E antibody
Product Synonym Names	Anti-RNA Polymerase II; RNA Polymerase II
Clonality	Monoclonal
Isotype	IgG2a
Host	Mouse
Form/Format	200 ug Protein G purified antibody in PBS, pH 7.4.
Specificity	Anti-RNA Polymerase II [Murine MAb recognizes the highly conserved heptapeptide repeat of the largest subunit of eukaryotic RNA polymerase II.] This antibody reacts with the highly conserved heptapeptide repeat of the largest subunit of eukaryotic RNA polymerase II. It inhibits promoterdirected transcription, but it does not inhibit elongation in the nonspecific transcription assay.
Preparation and Storage	These antibodies are stable for at least one (1) year at -20 degree C to -70 degree C. Store product in appropriate aliquots to avoid multiple freeze-thaw cycles
Molecular Weight	24,551 Da
Chromosome Location	Chromosome: 19; NC_000019.9 (1086578..1095391, complement). Location: 19p13.3
OMIM	180664
3D Structure	ModBase 3D Structure for P19388
Antigen	Purified wheat germ RNA polymerase II.
Preservatives	None. Available on request
Dilutions Instructions	Dilute in PBS or medium which is identical to that used in the assay system.
Product Categories/Family for anti-POLR2E antibody	Protein Transcription Antibodies
Application Notes for anti-POLR2E antibody	This antibody may be used to detect unproteolyzed RNA polymerase II or to inhibit specific transcription from class II promoters. This is a polyol-responsive antibody and can be used in gentle purifications of RNA polymerase II from from wheat germ, calf thymus, and yeast and is likely to purify RNA polymerase II from most eukaryotic organisms.
Related Product Information for anti-POLR2E antibody	MBS190407 is an antibody targeting POLR2E. Also known as RNA Polymerase II Monoclonal Antibody. Host: Mouse.
Product References and Citations for anti-POLR2E antibody	Thompson NE et al. 1989. J Biol Chem 264: 11511-11520; Thompson NE et al. 1990. J Biol Chem 265: 7069-7077.
Other Notes	Small volumes of anti-POLR2E antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly 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 dry ice fee may apply.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for POLR2E. It may not necessarily be applicable to this product.

NCBI GI #	232954
NCBI GeneID	5434
NCBI Accession #	AAB19339.1
UniProt Primary Accession #	P19388
UniProt Secondary Accession #	O43380; Q6PIH5; Q9BT06; B2R6L4; D6W5Y1
UniProt Related Accession #	P19388
NCBI Official Full Name	RNA polymerase II
NCBI Official Synonym Full Names	polymerase (RNA) II (DNA directed) polypeptide E, 25kDa
NCBI Official Symbol	POLR2E
NCBI Official Synonym Symbols	RPB5; XAP4; RPABC1; hRPB25; hsRPB5
UniProt Protein Name	DNA-directed RNA polymerases I, II, and III subunit RPABC1
UniProt Synonym Protein Names	DNA-directed RNA polymerase II 23 kDa polypeptide; DNA-directed RNA polymerase II subunit E; RPB5 homolog; XAP4
Protein Family	RNA polymerase II assembly factor
UniProt Gene Name	POLR2E
UniProt Entry Name	RPAB1_HUMAN
NCBI Protein Information	DNA-directed RNA polymerases I, II, and III subunit RPABC1; RPB5 homolog; DNA-directed RNA polymerase II subunit E; RNA polymerases I, II, and III subunit ABC1; DNA directed RNA polymerase II 23 kda polypeptide; DNA-directed RNA polymerase II 23 kDa polypeptide
NCBI Summary for POLR2E	This gene encodes the fifth largest subunit of RNA polymerase II, the polymerase responsible for synthesizing messenger RNA in eukaryotes. This subunit is shared by the other two DNA-directed RNA polymerases and is present in two-fold molar excess over the other polymerase subunits. An interaction between this subunit and a hepatitis virus transactivating protein has been demonstrated, suggesting that interaction between transcriptional activators and the polymerase can occur through this subunit. A pseudogene is located on chromosome 11. [provided by RefSeq]
UniProt Comments for POLR2E	POLR2E: DNA-dependent RNA polymerase catalyzes the transcription of DNA into RNA using the four ribonucleoside triphosphates as substrates. Common component of RNA polymerases I, II and III which synthesize ribosomal RNA precursors, mRNA precursors and many functional non-coding RNAs, and small RNAs, such as 5S rRNA and tRNAs, respectively. Pol II is the central component of the basal RNA polymerase II transcription machinery. Pols are composed of mobile elements that move relative to each other. In Pol II, POLR2E/RPB5 is part of the lower jaw surrounding the central large cleft and thought to grab the incoming DNA template. Seems to be the major component in this process. Belongs to the archaeal RpoH/eukaryotic RPB5 RNA polymerase subunit family. Chromosomal Location of Human Ortholog: 19p13.3 Cellular Component: nucleoplasm; DNA-directed RNA polymerase III complex; DNA-directed RNA polymerase II, core complex; cytosol; nucleus; DNA-directed RNA polymerase I complex Molecular Function: protein binding; DNA binding; DNA-directed RNA polymerase activity Biological Process: transcription from RNA polymerase II promoter; transcription initiation from RNA polymerase II promoter; termination of RNA polymerase III transcription; viral reproduction; somatic stem cell maintenance; positive regulation of viral transcription; RNA splicing; transcription from RNA polymerase I promoter; RNA elongation from RNA polymerase I promoter; termination of RNA polymerase I transcription; DNA repair; regulation of gene expression, epigenetic; transcription from RNA polymerase III promoter; nuclear mRNA splicing, via spliceosome; mRNA capping; nucleotide-excision repair; negative regulation of gene expression, epigenetic; transcription-coupled nucleotide-excision repair; RNA elongation from RNA polymerase II promoter; positive regulation of interferon type I production; innate immune response; gene expression; transcription initiation from RNA polymerase I promoter; RNA elongation from RNA polymerase III promoter
Research Articles on POLR2E	**1.** RPB5-mediating protein is required for the proliferation of hepatocellular carcinoma cells.

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