

Rabbit POLR2A Polyclonal Antibody | anti-POLR2A antibody

POLR2A Polyclonal Antibody

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA37000	Rabbit	Human, Mouse, Rat	Immunofluorescence, Immunocytochemistry, Immunohistochemistry, Western Blot

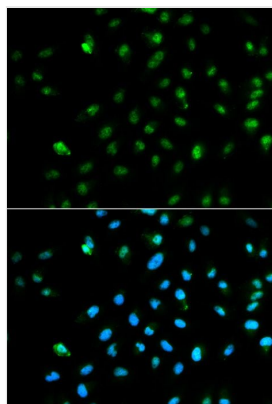
PRODUCT SYNONYMS

POLR2A; Polyclonal Antibody; POLR2A Polyclonal Antibody; RPB1; RPO2; POLR2; POLRA; RPBh1; RPOL2; RplILS; hsRPB1; hRPB220; anti-POLR2A antibody

PRODUCT SPECIFICATIONS

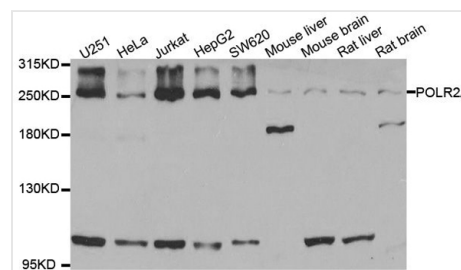
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Isotype	IgG
Purity/Purification	Affinity Purification
Concentration	1mg/ml (varies by lot)
Sequence Length	1970
Applicable Applications for anti-POLR2A antibody	IF (Immunofluorescence), ICC (Immunocytochemistry), IHC (Immunohistochemistry), WB (Western Blot)
Species	Human
Immunogen	Recombinant Protein
Immunogen	Recombinant protein of human POLR2A
Calculated Molecular Weight	270kDa
Preparation and Storage	Store at -20 degree C (regular) or -80 degree C (long term). Avoid freeze / thaw cycles. Buffer: PBS with 0.02% sodium azide, 50% glycerol, pH7.3.

IMAGES



IF (Immunofluorescence)

Immunofluorescence analysis of HepG2 cells using POLR2A antibody.



WB (Western Blot)

Western blot analysis of extracts of various cell lines, using POLR2A antibody at 1:1000 dilution. Secondary antibody: HRP Goat Anti-Rabbit IgG (H+L) at 1:10000 dilution. Lysates/proteins: 25ug per lane. Blocking buffer: 3% nonfat dry milk in TBST. Detection: ECL Basic Kit. Exposure time: 90s.

ADDITIONAL INFORMATION

Related Product Information for anti-POLR2A antibody	RNA polymerase II (RNAPII) is a large multi-protein complex that functions as a DNA-dependent RNA polymerase, catalyzing the transcription of DNA into RNA using the four ribonucleoside triphosphates as substrates (1). The largest subunit, RNAPII subunit B1 (Rpb1), also known as RNAPII subunit A (POLR2A), contains a unique heptapeptide sequence (Tyr1,Ser2,Pro3,Thr4,Ser5,Pro6,Ser7), which is repeated up to 52 times in the carboxy-terminal domain (CTD) of the protein (1). This CTD heptapeptide repeat is subject to multiple post-translational modifications, which dictate the functional state of the polymerase complex. Phosphorylation of the CTD during the active transcription cycle integrates transcription with chromatin remodeling and nascent RNA processing by regulating the recruitment of chromatin modifying enzymes and RNA processing proteins to the transcribed gene (1). During transcription initiation, RNAPII contains a hypophosphorylated CTD and is recruited to gene promoters through interactions with DNA-bound transcription factors and the Mediator complex (1). The escape of RNAPII from gene promoters requires phosphorylation at Ser5 by CDK7, the catalytic subunit of transcription factor IIH (TFIIH) (2). Phosphorylation at Ser5 mediates the recruitment of RNA capping enzymes, in addition to histone H3 Lys4 methyltransferases, which function to regulate transcription initiation and chromatin structure (3,4). After promoter escape, RNAPII proceeds down the gene to an intrinsic pause site, where it is halted by the negative elongation factors NELF and DSIF (5). At this point, RNAPII is unstable and frequently aborts transcription and dissociates from the gene. Productive transcription elongation requires phosphorylation at Ser2 by CDK9, the catalytic subunit of the positive transcription elongation factor P-TEFb (6). Phosphorylation at Ser2 creates a stable transcription elongation complex and facilitates recruitment of RNA splicing and polyadenylation factors, in addition to histone H3 Lys36 methyltransferases, which function to promote elongation-compatible chromatin (7,8).
Product Categories/Family for anti-POLR2A antibody	Polyclonal

NCBI AND UNIPROT INFORMATION

NCBI GI #	281185484
NCBI GeneID	5430
UniProt Accession #	P24928; Q6NX41; A6NN93; B9EH88
Molecular Weight	1970
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; RpiLS; hsRPB1; hRPB220
NCBI Protein Information	DNA-directed RNA polymerase II subunit RPB1; RNA polymerase II subunit B1; DNA-directed RNA polymerase II subunit A; RNA-directed RNA polymerase II subunit RPB1; DNA-directed RNA polymerase III largest subunit; DNA-directed RNA polymerase II largest subunit, RNA polymerase II 220 kd subunit
UniProt Protein Name	DNA-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

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/polyclonal/polr2a-antibody-immunofluorescence-immunocytochemistry-immunohistochemistry-western-blot-elisa/37000>