Active Human POLR2A

Cat. No. POLR2A-1148H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	
Species	Human
Source	HeLa
Description	RNA Polymerase II is responsible for transcribing nuclear genes encoding the messenger RNAs and several small nuclear RNAs. It is composed of 12 subunits. The two largest subunits are the most highly conserved among eukaryotes and are homologous to the α- and β-subunits of the bacterial RNA Polymerase. RNA Pol II cannot recognize its target promoter directly and cannot initiate transcription without accessory factors. Instead, this large multisubunit enzyme relies on both general transcription factors and transcriptional activators and coactivators to regulate transcription from class II promoters. The carboxyl terminal domain (CTD) of RNA Polymerase II contains 52 repeats of a heptapeptide that has multiple essential roles in transcription initiation, promoter clearance, transcript elongation, and the recruitment of the RNA processing machinery. Specific phosphorylation events at the CTD are associated with the spatial and temporal coordination of these different activities. Native RNA Polymerase II complex was purified from HeLa cells nuclear pellet or calf thymus. RNA Polymerase II has been applied for in vitro transcription assays on naked as well as on chromatin templates and for protein-protein interaction assays. The Pol II protein complex is 60% - 70% pure and is devoid of other general transcription factors.
Usage	For in vitro use only.

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Form	Liquid. Supplied in 20 mM Tris-HCl pH 8.0, 100 mM KCl, 0.2 mM EDTA, 1 mM DTT and 20% glycerol.
Activity	100 ng are sufficient for reconstituted in vitro transcription assays and 500 ng are sufficient for protein-protein interaction assays.
Purity	> 95% by SDS-PAGE.
Storage	Quality guaranteed for 12 months, Store at -80℃. Avoid freeze / thaw cycles.

GENE INFORMATION

Gene Name	POLR2A polymerase (RNA) II (DNA directed) polypeptide A, 220kDa [Homo sapiens]
Synonyms	POLR2A; polymerase (RNA) II (DNA directed) polypeptide A, 220kDa; RPB1; RPO2; POLR2; POLRA; RPBh1; RPOL2; RpIILS; hsRPB1; hRPB220; MGC75453; DNA-directed RNA polymerase II subunit A; DNA-directed RNA polymerase II A; RNA-directed RNA polymerase II subunit RPB1; DNA-directed RNA polymerase II largest subunit, RNA polymerase II 220 kd subunit; EC 2.7.7.48; EC 2.7.7.6
Gene ID	5430
mRNA Refseq	NM_000937
Protein Refseq	NP_000928
MIM	180660
UniProt ID	P24928
Chromosome	17p13.1

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Location	
Pathway	Huntington"s disease; Metabolic pathways; Purine metabolism; Purine metabolism; RNA polymerase; DNA Repair; Gene Expression; Influenza Infection; Regulatory RNA pathways; Transcription; mRNA Processing
Function	DNA binding; DNA-directed RNA polymerase activity; RNA-directed RNA polymerase activity; magnesium ion binding; nucleotidyltransferase activity; protein binding; transferase activity; ubiquitin protein ligase binding; zinc ion binding

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