

Recombinant RNA Pol II - CTD protein

Catalog No: 81036

Lot No: 23317001

Expressed In: Baculovirus

Quantity: 10 µg

Concentration: 0.15 µg/µl

Source: Human

Buffer Contents: Recombinant RNA Pol II - CTD protein is supplied at a concentration of 0.15 µg/µl in 25 mM HEPES pH 7.5, 300 mM NaCl, 10% glycerol, 0.04% Triton X-100, 0.5 mM TCEP.

Background: RNA pol II (RNA polymerase II) is responsible for synthesizing messenger RNA in eukaryotes. RNA pol II contains a carboxy terminal domain composed of heptapeptide repeats that are essential for polymerase activity. These repeats contain serine and threonine residues that are phosphorylated in actively transcribing RNA polymerase. In addition, RNA pol II, in combination with several other polymerase subunits, form the DNA binding domain of the polymerase, a groove in which the DNA template is transcribed into RNA.

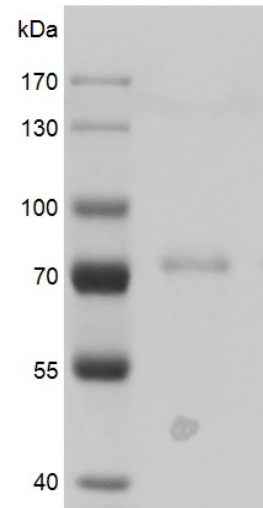
During the transcription cycle, the CTD of the large subunit of RNA pol II is reversibly phosphorylated. RNA pol II containing unphosphorylated CTD is recruited to the promoter, whereas the hyperphosphorylated CTD form is involved in active transcription. Phosphorylation occurs at two sites within the heptapeptide repeat, at serine 2, serine 5 and serine 7. RNA pol II Serine 5 phosphorylation is confined to promoter regions and is necessary for the initiation of transcription.

Protein Details: Recombinant RNA Pol II - CTD protein corresponding to amino acids 1489-1970 of RNA polymerase II subunit A (accession number NP_000928.1) was expressed in a baculovirus expression system and contains an N-terminal FLAG tag. Recombinant RNA Pol II - CTD protein consists of 52 heptapeptide repeats of the consensus sequence Y1-S2-P3-T4-S5-P6-S7. The molecular weight of Pol II - CTD protein is 50.7 kDa.

Application Notes: Recombinant RNA Pol II - CTD protein is suitable for use in *in vitro* transcription assays and protein interaction.

Storage and Guarantee: Recombinant proteins in solution are temperature sensitive and must be stored at -80°C to prevent degradation. Avoid repeated freeze/thaw cycles and keep on ice when not in storage. This product is for research use only and is not for use in diagnostic procedures. This product is guaranteed for 6 months from date of arrival.

Pol II (1489-1970)



Recombinant RNA Pol II - CTD protein gel

8% SDS-PAGE gel stained with Coomassie blue.

Predicted M.W.: 50.7 kDa

Observed M.W.: 75 kDa

Purity: > 70%