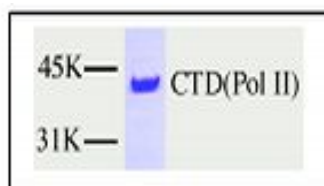


RNA pol II-CTD

RNA Polymerase II, Carboxy-terminal Domain

human, recombinant, *E. coli*

Cat. No.	Amount
PR-714	10 µg



For *in vitro* use only
Quality guaranteed for 12 months
Store at -80°C

Avoid freeze / thaw cycles

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

20 ng are sufficient for reconstituted transcription assays and 100 ng are sufficient for a protein-protein interaction assay.

Molecular Weight

44 kDa

Purity

> 95% by SDS-PAGE

Description

The carboxy-terminal repeat domain (CTD) of the largest subunit of RNA Pol II contains tandem repeats of a heptapeptide sequence Tyr-Ser-Pro-Thr-Ser-Pro-Ser which is highly conserved among eukaryotic organisms. There are two forms of RNA Pol II *in vivo*, designated IIO, which is extensively phosphorylated at the CTD, and IIA, which is not phosphorylated. The IIA form preferentially enters the pre-initiation complex (PIC), whereas IIO is found in the elongating complex. The kinase activity of TFIIF can mediate CTD phosphorylation, although other kinases, including Cdc2, Ctk1, the Srb10-Srb11 kinase-cyclin pair, and PTEFb, have also been implicated in CTD phosphorylation. A phosphatase responsible for the dephosphorylation of the CTD has also been identified. CTD phosphatase activity is regulated by TFIIB and TFIIF. The CTD has also been implicated in pre-mRNA processing, most likely functioning as a platform for the recruitment and assembly of factors involved in premRNA processing.

Recombinant CTD is isolated from an *E. coli* strain that carries the coding sequence of human RNA Pol II carboxy-terminal domain under the control of a T7 promoter.

CTD has been applied in *in vitro* transcription assays, splicing assays and protein-protein interaction assays.

The purified recombinant protein is greater than 95% homogeneous and contains no detectable protease, DNase, and RNase activity.

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