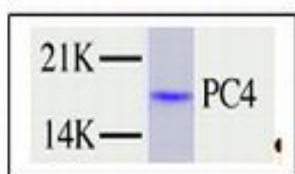


PC4

**Positive Cofactor 4, Transcriptional Coactivator, wild type
human, recombinant, *E. coli***

Cat. No.	Amount
PR-725	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

1 ng is sufficient for a gel mobility shift assay in a 20 µl reaction, 20 ng are sufficient for reconstituted transcription assay and 100 ng are sufficient for a protein-protein interaction assay.

Molecular Weight

16 kDa

Purity

> 95% by SDS-PAGE

Description

The human PC4 is a non-TAF transcription coactivator that mediates activator-dependent transcription by RNA polymerase II *in vitro* through most tested activators. The function of PC4 is apparently through interactions with transcriptional activators and the basal transcription machinery. It is negatively regulated by casein kinase II phosphorylation both *in vivo* and *in vitro*. PC4 strongly binds single stranded DNA and regulates HSSB (RPA)-dependent SV40 DNA replication. Recent studies indicated that PC4 can be acetylated by several histone acetyltransferase.

Recombinant PC4 protein (wild type, 127 amino acids) is isolated from an *E. coli* strain that carries the coding sequence of human PC4 under the control of T7 promoter and purified by conventional chromatography.

Recombinant PC4 has been utilized for *in vitro* function studies, including transcription, DNA replication, *in vitro* phosphorylation, gel mobility shift assay, protein-protein interactions, and as a substrate for *in vitro* acetylation.

Protein is greater than 95% homogeneous and contains no detectable protease, DNase, and RNase activity.

Selected References:

Ge *et al.* (1994) Purification, cloning, and characterization of a human coactivator, PC4, that mediates transcriptional activation of class II genes. *Cell* **78**:513.

Ge *et al.* (1994) Phosphorylation negatively regulates the function of coactivator PC4. *Proc. Natl. Acad. Sci. USA* **91**:12691.

Kretzschmar *et al.* (1994) A novel mediator of class II gene transcription with homology to viral immediate-early transcriptional regulators. *Cell* **78**:525.

Ge *et al.* (1996) Activator-dependent transcription by mammalian RNA polymerase II: *in vitro* reconstitution with general transcription factors and cofactors. *Methods Enzymol.* **274**:57.

Ballard *et al.* (1988) Identification of a novel 9-kDa polypeptide from nuclear extracts. DNA binding properties, primary structure, and *in vitro* expression. *J. Biol. Chem.* **263**:8450.

Pan *et al.* (1996) Transcription-positive cofactor 4 forms complexes with HSSB (RPA) on single-stranded DNA and influences HSSB dependent enzymatic synthesis of simian virus 40 DNA. *J. Biol. Chem.* **271**:22111.

Kumar *et al.* (2001) p300-mediated acetylation of human transcriptional coactivator PC4 is inhibited by phosphorylation. *J. Biol. Chem.* **276**:16804.