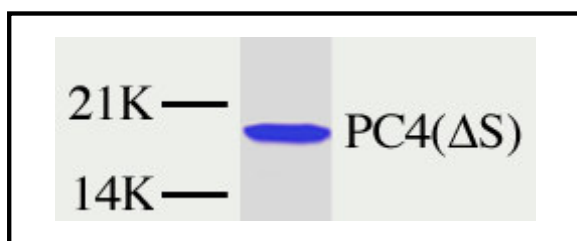


## PC4-mt (serine mutations)

### Positive Cofactor 4, serine mutations, Transcriptional Coactivator

human, recombinant, *E. coli*

Cat. No.	Amount
PR-727	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, 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.

#### 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. Phosphorylation negatively regulates the function of coactivator PC4. Mutational and mass spectrometric studies suggest that the *in vivo* and *in vitro* hyperphosphorylation of PC4 is mediated by casein kinase II and restricted to the the N-terminal serine-rich region. Phosphorylation of PC4 by casein kinase II inhibits the p300-mediated acetylation. The wild-type PC4 but not the kinase inhibitory-deficient mutant of PC4 (serine mutations) represses specific transcription *in vivo*. Recombinant PC4 protein (serine mutations, 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.

#### 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.
- 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.* (1994) Phosphorylation negatively regulates the function of coactivator PC4. *Proc. Natl. Acad. Sci. USA* **91**:12691.
- Kumar *et al.* (2001) p300-mediated acetylation of human transcriptional coactivator PC4 is inhibited by phosphorylation. *J. Biol. Chem.* **276**:16804.
- Schang *et al.* (2000) Human PC4 is a substrate-specific inhibitor of RNA polymerase II phosphorylation. *J. Biol. Chem.* **275**:6071.