

PC4/SUB1 Protein, Human, Recombinant (His)

General Information

Synonyms:	PC4;RPO2TC1;SUB1 homolog, transcriptional regulator;p14;SUB1;P15
Protein Construction:	A DNA sequence encoding the mature form of human SUB1 (P53999) (Met1-Leu127) was expressed with a polyhistidine tag at the N-terminus. Predicted N terminal: His
Species:	Human
Expression Host:	E. coli
Accession:	P53999
Molecular Weight:	16.2 kDa (predicted); 19 kDa (reducing conditions)

QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 90 % as determined by SDS-PAGE
Endotoxin:	Please contact us for more information.
Formulation:	Lyophilized from a solution filtered through a 0.22 µm filter, containing PBS, 10% glycerol, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:
A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

SUB1 belongs to the transcriptional coactivator PC4 family. It is a general coactivator that functions cooperatively with TAFs and mediates functional interactions between upstream activators and the general transcriptional machinery. SUB1 binds single-stranded DNA. Single-stranded DNA-binding proteins play many roles in nucleic acid metabolism, but their importance during transcription remains unclear. SUB1 exhibits strong genetic interactions with factors necessary for promoter melting. It localizes near the transcription bubble in vitro and

binds to promoters in vivo dependent upon preinitiation complexes assembly. SUB1 interacts with the nontemplate strand of RNAPII complexes during initiation. It may also be involved in stabilizing the multiprotein transcription complex.

Reference

Knaus R,et al.(1996) Yeast SUB1 is a suppressor of TFIIIB mutations and has homology to the human co-activator PC4. EMBO J. 15(8):1933-40.

Ge H,et al.(1994) Purification, cloning, and characterization of a human coactivator, PC4, that mediates transcriptional activation of class II genes. Cell. 78(3):513-23.

Kaiser K,et al.(1994) A novel mediator of class II gene transcription with homology to viral immediate-early transcriptional regulators. Cell. 78(3):525-34.

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