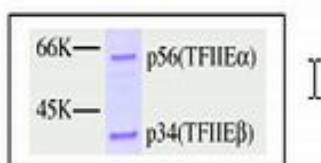


## TFIIE

Transcription Factor IIE,  $\alpha$ - +  $\beta$ -subunits  
 human, recombinant, *E. coli*

Cat. No.	Amount
PR-706	10 $\mu$ g



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 an *in vitro* reconstituted transcription, 100 ng are sufficient for a protein-protein interaction assay.

### Purity

> 95% by SDS-PAGE

### Description

The human Transcription Factor IIE (TFIIE) is composed of 56 kDa ( $\alpha$ ) and 34 kDa ( $\beta$ ) subunits and is shown to be a heterotetramer.

The 56 kDa subunit contains a region similar to a zinc-binding domain and a region sharing homology with the catalytic loop of a kinase domain.

TFIIE binds to RNA Polymerase II in solution and joins the preinitiation complex probably concomitant with RNA Polymerase II and TFIIF.

The recombinant proteins are purified from an *E. coli* strain that contains the coding sequence of human TFIIE  $\alpha$ - or  $\beta$ -subunit under the control of T7 promoter and functional TFIIE is reconstituted as a heterotetramer by combining both subunits in a 1:1 molar ratio.

The functional transcription factor has been applied for *in vitro* transcription assays and protein-protein interaction assays.

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

### Selected References:

Ohkuma *et al.* (1990) Factors involved in specific transcription by mammalian RNA polymerase II: purification and characterization of general transcription factor TFIIE. *Proc. Natl. Acad. Sci. USA* **87**:9163.

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Flores *et al.* (1990) Factors involved in specific transcription by mammalian RNA polymerase II. Purification and subunit composition of transcription factor IIF. *J. Biol. Chem.* **265**:5629.

Maldonado *et al.* (1996) Purification of human RNA polymerase II and general transcription factors. *Methods Enzymol.* **274**:72.

Ohkuma *et al.* (1995) Analysis of the role of TFIIE in basal transcription and TFIIF-mediated carboxy-terminal domain phosphorylation through structure-function studies of TFIIE-alpha. *Mol. Cell. Biol.* **15**:4856.