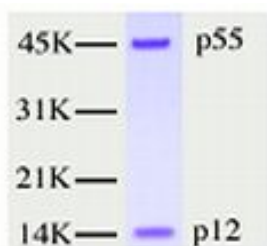


## TFIIA

Transcription Factor IIA, reconstituted  
human, recombinant, *E. coli*

Cat. No.	Amount
PR-731	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 *in vitro* transcription assay and 100 ng are sufficient for protein-protein interaction assays.

### Purity

> 95% by SDS-PAGE

### Description

The Transcription Factor IIA (TFIIA) has been shown to bind to the TBP-DNA complex and to increase the affinity of TBP for the TATA element. Human TFIIA consists of three subunits of 35 kDa ( $\alpha$ -subunit), 19 kDa ( $\beta$ -subunit) and 12 kDa ( $\gamma$ -subunit). The  $\alpha$ - and  $\beta$ -subunits are derived from the product, p55, of a single gene by an unknown mechanism. However, recombinant p55, in combination with a 12 kDa subunit ( $\gamma$ -subunit), retains native TFIIA activity.

p55 subunit of TFIIA is isolated from a strain of *E. coli* that contains the coding sequence of human p55 of TFIIA under the control of T7 promoter.

p12 subunit of TFIIA is isolated from a strain of *E. coli* that contains the coding sequence for human TFIIA  $\gamma$ -subunit under the control of T7 promoter.

Recombinant TFIIA can be used to super-shift TBP-DNA complex in a gel mobility shift assay and to stimulate activator-dependent transcription *in vitro*.

TFIIA is greater than 95% pure and does not contain any detectable protease, DNase, or RNase activities.

### Selected References:

- Buratowski *et al.* (1989) Five intermediate complexes in transcription initiation by RNA polymerase II. *Cell* **56**:549.  
Ranish *et al.* (1991) The yeast general transcription factor TFIIA is composed of two polypeptide subunits. *J. Biol. Chem.* **266**:19320.  
DeJong *et al.* (1993) A single cDNA, hTFIIA/alpha, encodes both the p35 and p19 subunits of human TFIIA. *Genes & Dev.* **7**:2220.  
Ma *et al.* (1993) Isolation of a cDNA encoding the largest subunit of TFIIA reveals functions important for activated transcription. *Genes & Dev.* **7**:2246.  
Sun *et al.* (1994) Reconstitution of human TFIIA activity from recombinant polypeptides: a role in TFIIID-mediated transcription. *Genes & Dev.* **8**:2336.