

# Active Recombinant Human General Transcription Factor IIA, 1, 19/37kDa

Cat. No. GTF2A1-1170H Lot. No. (See product label)

## SPECIFICATION

**Species** Human

**Source** E.coli

**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. The 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. The 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.

**Usage** For in vitro use only.

**Form** Liquid. Supplied in 20 mM Tris-HCl pH 8.0, 100 mM KCl, 0.2 mM EDTA, 1 mM DTT, 20% glycerol.

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|----------------------------|--|
| <b>Activity</b>            | 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.   |
| <b>Purity</b>              | > 95% by SDS-PAGE.   |
| <b>Storage</b>             | Quality guaranteed for 12 months, store at -80°C. Avoid freeze / thaw cycles.  |
| <b>GENE INFORMATION</b>    |  |
| <b>Gene Name</b>           | <a href="#">GTF2A1 general transcription factor IIA, 1, 19/37kDa [ Homo sapiens ]</a>  |
| <b>Synonyms</b>            | GTF2A1; general transcription factor IIA, 1, 19/37kDa; TF2A1; TFIIA; MGC129969; MGC129970; TFIIA alpha, p55, isoform 1; glucose regulated protein, 58kD pseudogene; TFIIA-42; Transcription initiation factor IIA subunit 1; Transcription initiation factor IIA alpha chain; TFIIA p35 subunit; TFIIA p19 subunit |
| <b>Gene ID</b>             | <a href="#">2957</a>   |
| <b>mRNA Refseq</b>         | <a href="#">NM_015859</a>  |
| <b>Protein Refseq</b>      | <a href="#">NP_056943</a>  |
| <b>MIM</b>                 | <a href="#">600520</a>   |
| <b>UniProt ID</b>          | <a href="#">P52655</a>   |
| <b>Chromosome Location</b> | 14q31  |
| <b>Pathway</b>             | Basal transcription factors; Gene Expression; HIV Infection; Transcription   |

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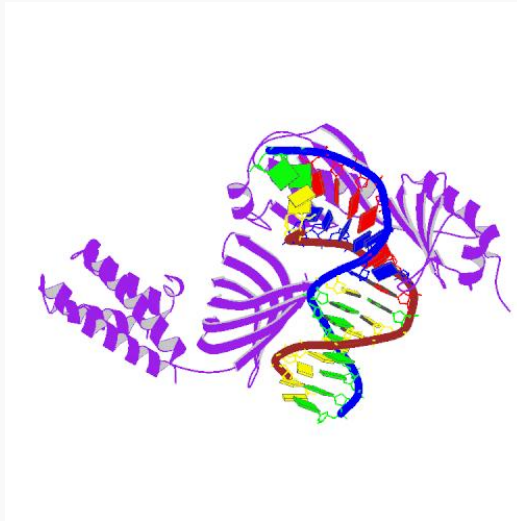
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**Function**

DNA binding; TATA-binding protein binding; general RNA polymerase II transcription factor activity; protein heterodimerization activity; transcription coactivator activity; transcription factor binding

**PDB rendering based on 1nvp.**



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