

TFIIH

Transcription Factor IIH, native complex human, HeLa

Cat. No.	Amount
PR-710	2 μ 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, 20% glycerol.

Activity

100 ng are sufficient for reconstituted *in vitro* transcription assay and 500 ng are sufficient for protein-protein interaction assay detected by immunoblot.

Purity

> 95% by SDS-PAGE

Description

TFIIH is a multicomponent basal transcription factor complex. Nine subunits have been identified within the TFIIH holoenzyme complex. Various enzymatic activities, including DNA repair, helicase, and cyclindependent kinase activities, have been reported. The XPB, p62, p52, p44, and p34 subunits are thought to constitute the "core" of the TFIIH transcription machinery. Although the p44 and p34 subunits have no defined enzymatic activity, their zinc finger structures suggest that they may be DNA-binding proteins that might mediate interactions with soluble transcription factors. The Cdk-activating kinase (CAK) subcomplex, comprising subunits Cdk7, cyclin H, and MAT1, phosphorylate several cyclin-dependent kinases (Cdks), as well as the carboxy-terminal domain of pol II. Several inherited human disorders such as Xeroderma pigmentosum (XP), Cockayne syndrome (CS) and trichothiodystrophy (TTD) are associated with mutations in TFIIH subunits.

Native TFIIH complex is isolated from HeLa nuclear extract after several chromatographic purification steps. Purified TFIIH has been applied for *in vitro* transcription assays, DNA repair, DNA-protein, RNA-protein, protein-protein interaction assays as well as for *in vitro* correction of the nuclear excision repair defect of XPD, XPB and TTD-A fibroblasts.

The TFIIH protein complex is 60% - 70% pure and is devoid of other general transcription factors.

Selected References:

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