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# TFIIH

National Cancer Institute

## Source

National Cancer Institute. *TFIIH*. NCI Thesaurus. Code C20593.

TFIIH is a multisubunit factor consisting of at least 5 polypeptides of 92, 62, 43, 40, and 35 kD. The nonphosphorylated form of RNA polymerase II is recruited by TFIIF to the DB complex (a DNA-protein complex composed of the TATA-binding protein subunit of TFIIID in association with the TATA motif and TFIIIB). This complex is then recognized by TFIIIE, TFIIH, and TFIIJ to generate a transcription-competent complex. Phosphorylation of the C-terminal domain of the largest subunit of RNA polymerase II controls the transition from transcription initiation to elongation. The general transcription factor TFIIH contains a kinase activity capable of phosphorylating this domain. Factors that promote the association of RNA polymerase II with the preinitiation complex stimulate this activity. TFIIIE, which is required for the stable association of TFIIH with the preinitiation complex, affects the processivity of TFIIH kinase. (from OMIM 189972)