HSV-1 ICP4 Immediate Early Protein (10F1): sc-56986

**BACKGROUND**

Infected-cell polypeptide 4 (ICP4) of herpes simplex virus type 1 (HSV-1) is one of five immediate early transcriptional regulatory proteins produced promptly upon infection. ICP4 is required for the adequate transcription of early and late viral genes. Necessary for viral growth, ICP4 immediate early protein functions to amplify the rates of transcription of viral genes during viral infection by activating gene expression. ICP4 immediate early protein also initiates transcription in reconstituted transcription reactions. By either increasing or decreasing the rate of formation of transcription initiation complexes mediated by RNA polymerase II, transcription is activated through a set of general transcription factors (GTFs). ICP4 immediate early protein specifically promotes transcription PIC (preinitiation complexes) formation by increasing the binding of TFIIID to the TATA box. Data suggests that upon infection, the ICP4 protein also retains a critical role in directing the endless looped conformation of the HSV-1 genome.

**REFERENCES**