Recombinant TBP protein

Catalog No: 81114, 81814
Lot No: 05818002
Expressed In: Baculovirus

Quantity: 20, 1000 µg
Concentration: 0.25 µg/µl
Source: Human

Buffer Contents: Recombinant TBP protein is supplied in 25 mM HEPES-NaOH pH 7.5, 500 mM NaCl, 10% glycerol, 0.04% Triton X-100 and 0.5 mM TCEP.

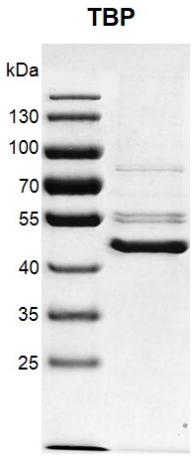
Background: TBP (also known as TATA box binding protein, GTF2D, transcription initiation factor TFIID TBP subunit, TATA-binding factor, TF2D, TFIID or SCA17). RNA polymerase II is an enzyme found in eukaryotic cells composed of 12 subunits that catalyzes transcription of DNA. Transcription consists of three phases: initiation, elongation and termination. Transcription initiation involves TFIID, which is composed of TATA-binding protein (TBP) and TBP-associated factors (TAFs), as part of the RNA polymerase II pre-initiation complex (PIC). TBP binds to the TATA box sequence, which is located upstream of the transcription start site in some eukaryotic gene promoters, and helps position RNA polymerase II. TBP contains a string of glutamines at the N-terminus which affect DNA binding and the rate of transcription complex formation. TBP is also associated with RNA polymerase I and RNA polymerase III.

Protein Details: Recombinant human TBP protein was expressed in a baculovirus expression system as the full length protein (accession number NP_003185.1) with an N-terminal FLAG tag. The molecular weight of the protein is 39 kDa.

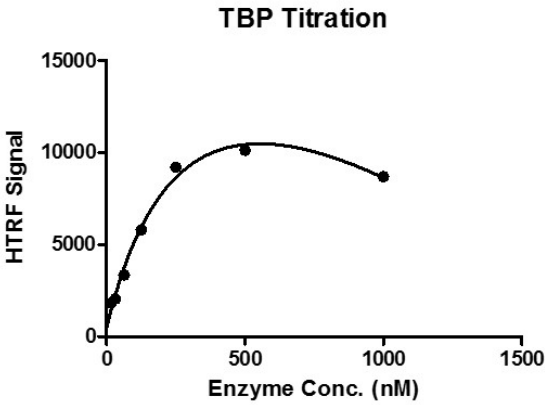
Application Notes: Application Notes: This protein is suitable for use in protein-protein interaction, in vitro transcription assay, binding assay.

Binding Assay conditions: 1 µM oligo dsDNA (DNA sequence: 5'-TCGTATAAAAGGC-3') was incubated with different concentrations of TBP protein in 10 µl system containing 50 mM HEPES-NaOH pH 7.5, 0.1% BSA for 1 hour, then 10 µl FLAG antibody and SA-XL665 mixture (each 1:100 dilution in binding buffer) was added to each reaction system and incubated for 30 min. All the operations and reactions were performed at room temperature. HTRF assay was used for detection.

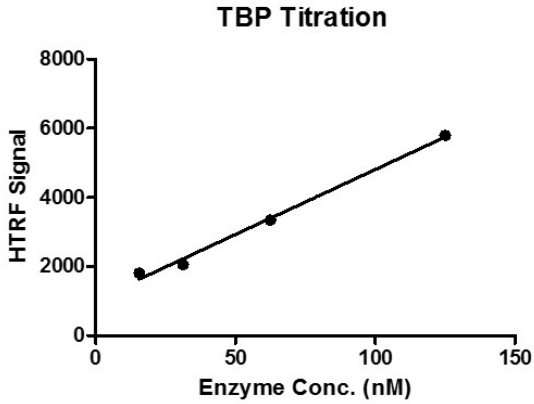
Storage and Guarantee: Recombinant proteins in solution are temperature sensitive and must be stored at -80°C to prevent degradation. Avoid repeated freeze/thaw cycles and keep on ice when not in storage. This product is for research use only and is not for use in diagnostic procedures. This product is guaranteed for 6 months from date of arrival.



Recombinant TBP protein
10% SDS-PAGE Coomassie staining
MW: 39 kDa
Purity: >80%



HTRF assay for TBP activity
1 µM oligo dsDNA (DNA sequence: 5'-TCGTATAAAAGGC -3') was incubated with different concentrations of TBP protein in 10 µl system containing 50 mM HEPES-NaOH pH 7.5, 0.1% BSA for 1 hour, then 10 µl anti-FLAG antibody and SA-XL665 mixture (each 1:100 dilution in binding buffer) was added to each reaction system and incubated for 30 min. All the operations and reactions were performed at room temperature. HTRF assay was used for detection.



HTRF assay for TBP activity
1 µM oligo dsDNA (DNA sequence: 5'-TCGTATAAAAGGC -3') was incubated with different concentrations of TBP protein in 10 µl system containing 50 mM HEPES-NaOH pH 7.5, 0.1% BSA for 1 hour, then 10 µl anti-FLAG antibody and SA-XL665 mixture (each 1:100 dilution in binding buffer) was added to each reaction system and incubated for 30 min. All the operations and reactions were performed at room temperature. HTRF assay was used for detection.