Recombinant TF2B protein (His tag)

Catalog Number	542526
Synonyms	General transcription factor TFIIB; S300-II
Species	Human
Expression System	E. coli
Accession	Q00403
Molecular Weight	Predictes a molecular mass of 36.49 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 37 kDa band.

Product Information

Sequence Region	1-316
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>89%, by SDS-PAGE with Coomassie Brilliant Blue staining.
Endotoxin	Not tested.
Activity	Not tested.
Stability	Samples are stable for up to twelve months from date of receipt at -70℃
Protein Construction	DNA encoding 1-316 aa (Q00403) were fused with 6His tag.

Storage & Handling

Reconstitution	Reconstitute at 0.25 μg/μl in sterile water for short-term storage. Reconstitution with 50% glycerol solution is recommended for longer term storage (see Stability and Storage for more details). If a different concentration is needed for your purposes please adjust the reconstitution volume as required (please note: the ion concentration of the final solution will vary according to the volume used). Note: Centrifuge vial before opening. When reconstituting, gently pipet and wash down the sides of the vial to ensure full recovery of the protein into solution.
Storage	Store it under sterile conditions at -20℃ to -80℃. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.
Shipping	In general, recombinant proteins are provided as lyophilized powder which are shipped at ambient temperature. Bulk packages of recombinant proteins are provided as frozen liquid. They are shipped out with blue ice unless customers require otherwise.

Description

Description	Recombinant Human Transcription Initiation Factor IIB (GTF2B) fragment (residues 1-316) is a high-quality protein designed for structural and biochemical studies. This fragment represents a stable, soluble unit of the general transcription factor TFIIB, essential for RNA polymerase II-mediated transcription initiation, making it an ideal tool for investigating eukaryotic gene regulation mechanisms. Transcription Initiation Factor IIB (TFIIB) is a critical general transcription factor in humans that facilitates transcription initiation by RNA polymerase II. It plays a central role in pre-initiation complex (PIC) formation, bridging TATA box-binding protein (TBP) and the Pol II-TFIIF complex to recruit Pol II to promoter DNA. TFIIB binds to specific DNA promoter elements (BREu and BREd) independently of TBP, modulates transcription start site selection, and exhibits autoacetyltransferase activity that enhances activated transcription. Located in the nucleus and associated with chromatin at core promoter regions, TFIIB cycles on and off the PIC during transcription initiation and elongation transitions, with its acetylation state influencing cell cycle-dependent localization. This recombinant fragment encompasses the full functional domain (residues 1-316), preserving key biochemical properties for research applications.