

## BPTF Protein, Human

Cat. No.:	HY-P701611
Synonyms:	BPTF; Nucleosome-remodeling factor subunit BPTF; Bromodomain and PHD finger-containing transcription factor; Fetal Alz-50 clone 1 protein; Fetal Alzheimer antigen
Species:	Human
Source:	E. coli
Accession:	Q12830 (D2865-A3033)
Gene ID:	2186
Molecular Weight:	

### PROPERTIES

Appearance	Solution.
Formulation	Supplied as a 0.22 µm filtered solution of 50 mM Tris-HCl, pH7.5, 200 mM NaCl, 20% glycerol.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	Please use rapid thawing with running water to thaw the protein.
Storage & Stability	Stored at -80°C for 1 year. It is stable at -20°C for 3 months after opening. It is recommended to freeze aliquots at -80°C for extended storage. Avoid repeated freeze-thaw cycles.
Shipping	Shipping with dry ice.

### DESCRIPTION

#### Background

BPTF protein functions as a regulatory subunit within the ATP-dependent NURF-1 and NURF-5 ISWI chromatin remodeling complexes, orchestrating the assembly of ordered nucleosome arrays on chromatin to facilitate DNA access during essential processes such as DNA replication, transcription, and repair. The NURF-1 ISWI chromatin remodeling complex, characterized by a lower ATP hydrolysis rate compared to NURF-5, plays a pivotal role in brain development by binding to the promoters of En1 and En2, positively regulating their expression. BPTF, as a histone-binding protein, exhibits a preference for H3 tails trimethylated on 'Lys-4' (H3K4me3), a marker for transcription start sites of active genes, and interacts with dimethylated H3 tails to a lesser extent. Beyond histone binding, BPTF may directly regulate transcription through interaction with DNA or transcription factors. It interacts with MAZ and KEAP1 and is a crucial component of the NURF-1 ISWI chromatin remodeling complex, which includes SMARCA1, BPTF, RBBP4, and RBBP7. Additionally, BPTF forms the catalytically inactive BPFT-SMARCA1 complex and is a component of the NURF-5 ISWI chromatin remodeling complex with SMARCA5/SNF2H. These interactions underscore the multifaceted role of BPTF in chromatin dynamics and transcriptional regulation.

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**Caution: Product has not been fully validated for medical applications. For research use only.**

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