PRODUCT DATASHEET

BPTF-[PHD-BRD] (His) (Bromodomain and PHD finger-containing Transcription Factor; FALZ; FAC1)

CATALOG NO.: RD-11-204 **LOT NO.:**

DESCRIPTION: Human recombinant BPTF PHD-bromodomain construct (residues 2722-2920 (C-term.); Genbank Accession # NM_182641 MW = 26.0 kDa) expressed in *E. coli* with an N-terminal His-tag. Full-length BPTF[1,2] is a DNA and histone-binding component of the NURF nucleosome remodeling complex (see review[3]). This construct comprises BPTF's second PHD zinc-finger, which primarily binds histone H3K4me3[4,5], and the adjacent bromodomain, which has binding affinity for various histone tail acetyllysines[6,7], including H4 K5Ac[7], K12Ac[6] and K16Ac[6]. BPTF expression is elevated in developing neurons[8], but also in neuronal tissue under various neurodegenerative conditions[9,10]. Amplification of the BPTF-coding chromosomal locus is prevalent in various cancers and knockdown of BPTF restricts proliferation in cultured cells with an engineered pre-malignant phenotype[11].

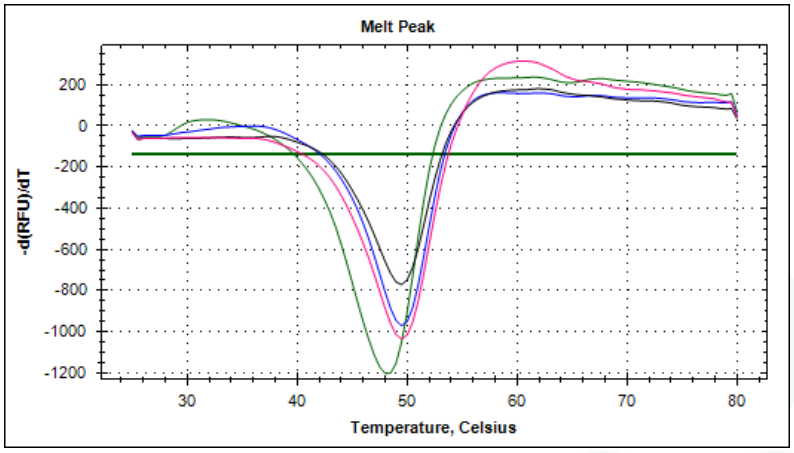
PURITY: >95% by SDS-PAGE

SUPPLIED AS: _ µg/µL in 50 mM Tris-HCl, pH 7.5, 500 mM NaCl, 1 mM TCEP, 10% glycerol (v/v)

STORAGE: -70°C. Thaw quickly and store on ice before use. The remaining, unused, undiluted protein should be snap frozen, for example in a dry/ice ethanol bath or liquid nitrogen. Minimize freeze/thaws if possible, but very low volume aliquots (<5 µl) or storage of diluted protein is not recommended.

REFERENCES: 1) K.L. Jordan-Sciutto *et al. J. Biol. Chem.* 1999 **274** 35262; 2) M.H. Jones *et al.* Genomics 2000 **63** 35; 3) S.G. Alkhatib & J.W. Landry *FEBS Lett.* 2011 **585** 3197; 4) H. Li *et al. Nature* 2006 **442** 91; 5) H. Li *et al. Mol. Cell* 2007 **28** 677; 6) A.J. Ruthenburg *et al. Cell* 2011 **145** 692; 7) P. Filippakopoulos *et al. Cell* 2012 **149** 214; 8) K.L. Jordan-Sciutto *et al. Biochem. Biophys. Res.* 1999 **260** 785; 9) S. Schoonover *et al. J. Neuropathol. Exp. Neurol.* 1996 **55** 444; 10) X. Mu *et al. Exp. Neurol.* 1997 **146** 17; 11) Y. Buganim *et al. PLoS One* 2010 **5** e9657

Coomassie blue-stained SDS-PAGE (12% acrylamide) of 5 µg of RBC BPTF-[PHD-BRD] (His). MW markers (left) are, from top, 220, 160, 120, 100, 90, 80, 70, 60, **50**, 40, 30, 25, **20**, 15, 10 kDa.



Differential Scanning Fluorimetry of RBC BPTF-[PHD-BRD] (His) in the Presence or Absence of Common Bromodomain Ligands. Thermal denaturation of BPTF-[PHD-BRD] (His) (0.1 mg/mL) is detected (CFX384 TMTouch thermal cycler, 'FRET' channel; Bio- Rad) by increased binding and fluorescence of the dye SYPRO®Orange (Life Technologies). Shown are the first derivatives of fluorescence vs. temperature plots in which the "peaks" indicate the Tm's (inflection points) of the original plots. Addition of either PFI1 (pink) or CBP112 (black) or Bromosporine (blue) (all 25 µM) stabilizes the protein folding and shifts the Tm (inflection point) from 48°C to 49.5°C.

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