PRODUCT DATASHEET

BRPF1b (His) (Bromodomain and PHD finger-containing protein 1, Peregrin, BR140, (Isoform 2))

CATALOG NO.: RD-11-205 **LOT NO.:**

DESCRIPTION: Human recombinant BRPF1b bromodomain (residues 627-740; Genbank Accession # NM_004634; MW = 16.2 kDa) expressed in *E. coli* with an N-terminal His-tag. A scaffolding component of the MOZ/MORF histone acetyltransferase (HAT) complex[1] and also an HBO1-BRPF1 HAT complex[2], native BRPF1b contains, in addition to its acetyllysine-binding bromodomain, two other presumed histone/chromatin binding domains, a PWWP domain[3,4] and a PHD zinc-finger. The BRPF1 bromodomain binds multiple acetyllysines in histone N-terminal tails, with preference for H2AK5Ac, H4K12Ac and H3K14Ac[5]. BRPF1 forms a complex with MOZ-TIF2 fusion proteins formed due to chromosomal translocations associated with acute myeloid leukemia (AML)[6]. Depletion of BRPF1 interferes with the MOZ-TIF2-driven transformation and upregulation of HOX gene expression, suggesting that BRPF1 could be a therapeutic target for AML[6].

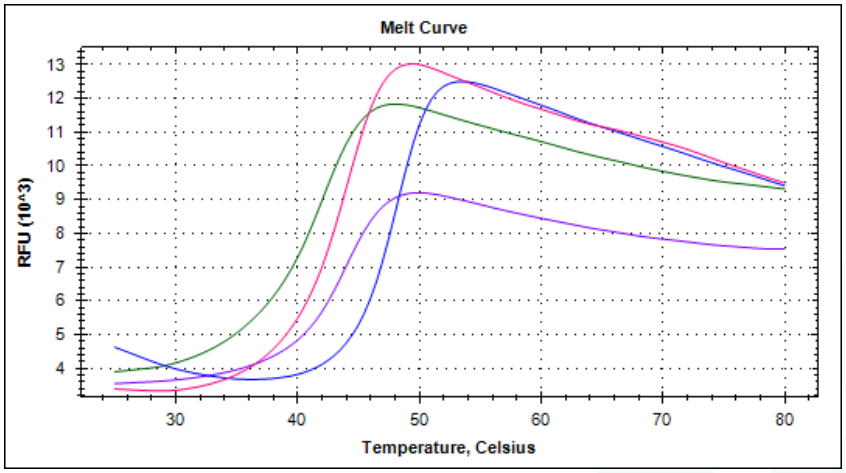
PURITY: >95% by SDS-PAGE

SUPPLIED AS: _ µg/µL in 50 mM Tris/HCl, pH 7.5, 500 mM NaCl, 1 mM TCEP, 10% glycerol (v/v) as determined by OD_{280}.

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) M. Ullah *et al. Mol. Cell. Biol.* 2008 **28** 6828: 2) M. Lalonde *et al. Genes Dev.* 2013 **27** 2009; 3) A. Vezzoli *et al. Nat. Struct. Mol. Biol.* 2010 17 617; 4) H. Wu *et al. PLoS One* 2011 **6** e18919; 5) A. Poplawski *et al. J. Mol. Biol.* 2014 **426** 1661; 6) H. Shima *et al. Int. J. Hematol.* 2014 **99** 21

Coomassie blue stained SDS-PAGE (4-12% acrylamide) of 4 µg of RBC BRPF1b (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 BRPF1b (His) in the Prescence and Absence of Known Bromodomain Inhibitors. Thermal denaturation of BRPF1b (His) is detected (CFX384™ Touch thermal cycler, 'FRET' channel; Bio-Rad) by increased binding and fluorescence of the dye SYPRO® Orange (Life Technologies). In the presence of 25 µM of the bromodomain inibitors PFI1 (pink), RVX-208 (purple) or Bromosporine (blue) the protein is stabilized and the Tm (inflection point) shifted from 42°C (green, solvent control) to 44°C, 44°C or 48°C respectively.

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