

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

CATALOG NO.: RD-11-260

LOT NO.:

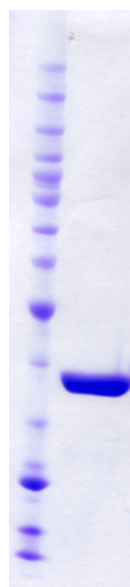
DESCRIPTION: Human recombinant BRPF1b bromodomain (residues 627-740; Genbank Accession # NM_004634; MW = 40.5 kDa) expressed in *E.coli* with an N-terminal GST tag. A scaffolding component of the MOZ/MORF histone acetyltransferase (HAT) complex¹ and also an HBO1-BRPF1 HAT complex², native BRPF1b contains, 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 H3K14Ac⁵. 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 AML⁶.

PURITY: >95% by SDS-PAGE

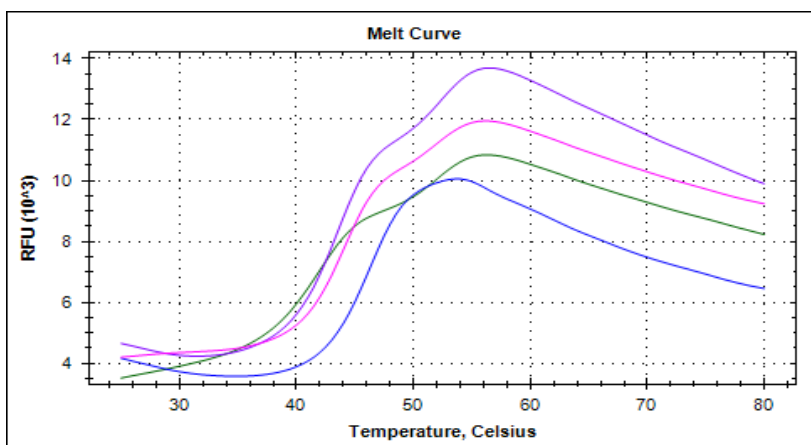
SUPPLIED AS: $\mu\text{g}/\mu\text{L}$ in 50 mM Tris HCl, pH 7.5, 500 mM NaCl, 1 mM TCEP, 10 % glycerol as determined by OD₂₈₀.

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 enzyme 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 (GST). 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 (GST) in the Presence and Absence of Known Bromodomain Inhibitors. Thermal denaturation of BRPF1b (GST) is detected (CFX384™ Touch thermal cycler, 'FRET' channel; Bio-Rad) by increased binding and fluorescence of the dye SYPRO® Orange (Life Technologies). Addition of 25 μM Bromosporine (blue), PFI1 (pink) and RVX-208 (purple) stabilizes the protein folding and shifts the Tm (inflection point) from 42°C to 46.5°C, 44°C and 43.5°C, respectively.

This product is not intended for therapeutic or diagnostic use in animals or in humans.

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