

BRPF1 α (His)

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

CATALOG NO.: RD-11-221

LOT NO.:

DESCRIPTION: Human recombinant BRPF1 α bromodomain (residues 627-746; Genbank Accession # NM_001003694; MW = 16.9 kDa) expressed in *E. coli* with an N-terminal His-tag. Relative to BRPF1b (BRPF1 Isoform 2), the BRPF1 α bromodomain contains a six amino acid insert, EVTELD, after residue 660. A scaffolding component of the MOZ/MORF histone acetyltransferase (HAT) complex¹ and also an HBO1-BRPF1 HAT complex², native BRPF1 α 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 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 BRPF1 α (His). MW markers (left) are, from top, 220, 160, 120, 100, 90, 80, 70, 60, **50**, 40, 30, 25, **20**, 15 & 10 kDa.

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

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