

## BAZ2B (His)

(Bromodomain adjacent to zinc finger domain protein 2B; hWALp4; KIAA1476)

**CATALOG NO.:** RD-11-199

**LOT NO.:**

**DESCRIPTION:** Human recombinant BAZ2B bromodomain (residues 2054-2168; Genbank Accession # NM\_013450; MW = 16.12 kDa) expressed in *E. coli* with an N-terminal His-tag. In addition to a bromodomain, native BAZ2B comprises several other domains (DDT, PHD, MBD (methyl-CpG-binding domain)) that may interact with the DNA and histones of chromatin and its associated proteins, including chromatin remodeling complexes<sup>1</sup>. The BAZ2B bromodomain binds various Lys(Ac) residues in singly acetylated histone peptide microarrays (histones H1.4, H2A, H2B, H3, H4) with binding to histone H3 K14(Ac) confirmed in solution by isothermal titration calorimetry (ITC)<sup>2</sup>. An allele of the BAZ2B locus shows an association with increased risk for sudden cardiac death<sup>3</sup>. An inhibitor/ligand for the BAZ2B bromodomain with ~10  $\mu$ M affinity has been developed by a fragment-based screening approach<sup>4</sup>. The BAZ2B bromodomain structure has been determined both in solution, by NMR<sup>5</sup> and by x-ray crystallography (MMDB ID: 69599, PDB ID: 3G0L)<sup>2</sup>.

**PURITY:** >95% by SDS-PAGE

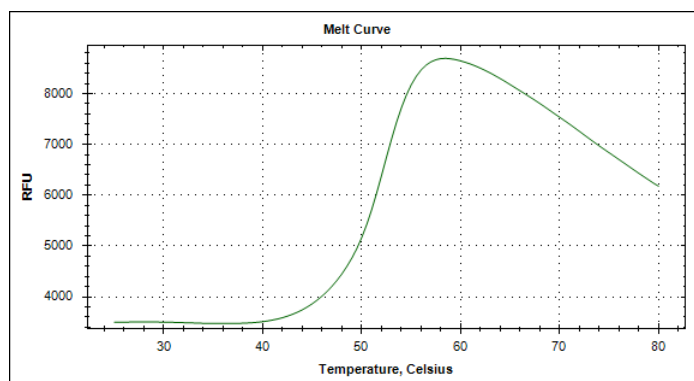
**SUPPLIED AS:** \_  $\mu$ g/ $\mu$ L in 50 mM Tris-HCl, pH 7.5, 500 mM NaCl, 1 mM TCEP, 10% glycerol as determined by OD<sub>280</sub>

**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  $\mu$ l) or storage of diluted protein is not recommended.

**REFERENCES:** 1) M.H. Jones *et al. Genomics* 2000 **63** 40; 2) P. Filippakopoulos *et al. Cell* 2012 **149** 214; 3) D.E. Arking *et al. PLoS Genet.* 2011 **7** e1002158; 4) F.M. Ferguson *et al. J. Med. Chem.* 2013 **56** 10183; 5) X.R. Kin *et al. Riken Structural Genomics Initiative* 2007 MMDB ID: 47378, PDB ID: 2E7O



**Coomassie blue stained SDS-PAGE (4-12% acrylamide) of 4  $\mu$ g of RBC BAZ2B (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 BAZ2B (His)** Thermal denaturation of BAZ2B (His) is detected (CFX384TM Touch thermal cycler, 'FRET' channel; Bio- Rad) by increased binding and fluorescence of the dye SYPRO<sup>®</sup>Orange (Life Technologies). The apo form of BAZ2B (His) displays a  $T_m$  of 52°C and is not stabilized in the presence of various known bromodomain ligands (JQ1, PF1, CBP112, Bromosporine, SGC-CBP30, BET151 and RVX-208; all tested at 25  $\mu$ M, not shown).

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

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