

**BAZ1B (GST)**

(Bromodomain adjacent to zinc finger domain protein 1B; WSTF)

**CATALOG NO.:** RD-11-252

**LOT NO.:**

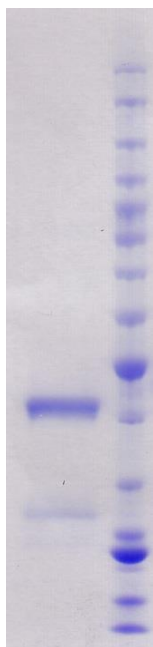
**DESCRIPTION:** Human recombinant BAZ1B bromodomain (residues 1340-1457; Genbank Accession # NM\_032408.2; MW = 44.1 kDa) as an N-terminal GST-fusion protein with C-terminal His- and Strep-tags expressed in *E. coli*. BAZ1B (WSTF) is a key subunit of several ATP-dependent chromatin remodeling complexes with activities in nucleosome and chromatin assembly, in transcriptional regulation (at vitamin D-receptor (VDR) target genes) and in DNA replication and repair (see review<sup>1</sup>). The full-length protein comprises multiple domains, including the N-terminal domain which confers the atypical tyrosine kinase activity responsible for H2A.X Tyr142 phosphorylation, a key regulatory mark in the DNA damage response<sup>2,3</sup>. The BAZ1B bromodomain displays affinity for several acetylated histone tail peptides, particularly ones incorporating H3K14(Ac)<sup>4</sup>. Interaction between BAZ1B and the gene promoter for the vitamin D synthetic enzyme 25(OH)D<sub>3</sub> 1 $\alpha$ -hydroxylase, most likely mediated by bromodomain binding to acetylated histones, is necessary for ligand-dependent transcriptional repression by VDR<sup>4</sup>. By virtue of its regulatory role in aromatase gene expression, BAZ1B may hold potential as a target for therapy in estrogen-dependent breast cancer<sup>5</sup>.

**PURITY:** >80% 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 (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  $\mu$ l) or storage of diluted protein is not recommended.

**REFERENCES:** 1) C. Barnett & J.E. Krebs *Biochem. Cell Biol.* 2011 **89** 12; 2) A. Xiao *et al. Nature* 2009 **457** 57; 3) N. Singh *et al. Proc. Natl. Acad. Sci. USA* 2012 **109** 14381; 4) R. Fujiki *et al. EMBO J.* 2005 **24** 3881; 5) J. Lundqvist *et al. Biochim. Biophys. Acta* 2013 **1833** 40



**Coomassie blue-stained SDS-PAGE (12% acrylamide) of 2  $\mu$ g of RBC BAZ1B (GST)**

MW markers (right) 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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