PRODUCT DATA SHEET

ATAD2B (GST) (ATPase family AAA domain-containing protein 2B; KIAA1240)

CATALOG NO.: RD-11-185 **LOT NO.:**

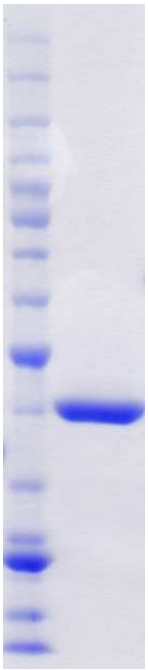
DESCRIPTION: Human recombinant ATAD2B bromodomain (residues 952-1086; Genbank Accession # NM_017552; MW = 42.6 kDa) expressed as an N-terminal GST-fusion protein in *E. coli*. In addition to a bromodomain, native ATAD2B contains an AAA ATPase domain. Expressed and located to the nucleus during neuronal development (chick embryos), ATAD2B is expressed at elevated levels in some human tumors (glioblastoma, oligodendroglioma, breast cancer), but is present in the cytoplasm or membrane-bound fractions[1]. The ATAD2B bromodomain binds various Lys(Ac) residues in singly acetylated histone peptide microarrays (histones H1.4, H2A, H2B, H3, H4) with binding to histone H4 K5(Ac) confirmed in solution by isothermal titration calorimetry (ITC)[2]. The ATAD2B bromodomain structure has been determined both in solution, by NMR[3] and by x-ray crystallography (MMDB ID: 80737, PDB ID: 3lXJ)[2].

PURITY: >95% by SDS-PAGE

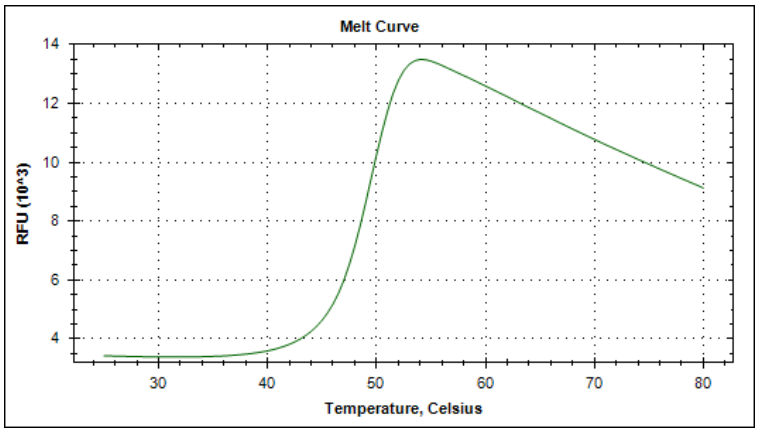
SUPPLIED AS: _ µg/µL in 50 mM HEPES/NaOH, pH 7.0, 500 mM NaCl, 1 mM TCEP, 10% glycerol as determined by OD_{280}

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 enzyme is not recommended.

REFERENCES: 1) N.T. Leachman *et al. Dev. Growth Differ.* 2010 **52** 747; 2) P. Filippakopoulos *et al. Cell* 2012 **149** 214; 3) R. Sano *et al. Riken Structural Genomics Initiative* 2006 MMDB ID: 42016, PDB ID: 2DKW



Coomassie blue-stained SDS-PAGE (4-12% acrylamide) of 4 µg of RBC ATAD2B (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 ATAD2B (GST) Thermal denaturation of ATAD2B (GST) is detected (CFX384™ Touch thermal cycler, 'FRET' channel; Bio-Rad) by increased binding and fluorescence of the dye SYPRO® Orange (Life Technologies). Apo form of ATAD2B (GST) (2.6 µM) displays a Tm of 49.5°C and is not stabilized in the presence of various known bromodomain ligands (JQ1, PFI1, CBP112, Bromosporine, SGC-CBP30, BET151 and RVX-208; all tested at 25 µM).

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

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