

ASH1L-[BRD] (His) (ASH-1 like protein; huASH1; KMT2H)

CATALOG NO.: RD-11-202

LOT NO.:

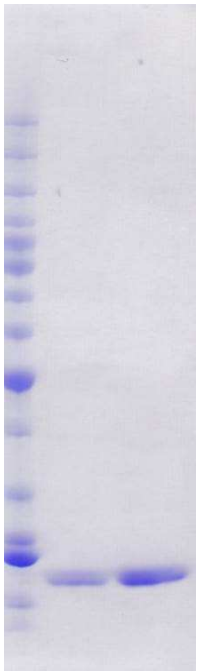
DESCRIPTION: Human recombinant ASH1L bromodomain (residues 2428-2559; Genbank Accession # NM_018489; MW = 17.7 kDa) expressed in *E. coli* with an N-terminal His-tag. ASH1L is a large (333 kDa), multi-domain protein associated with actively transcribed regions of chromatin. Its bromodomain lies C-terminal to its SET domain, which confers histone H3K36 methyltransferase activity¹⁻³. ASH1L is the human homolog of *Drosophila* Ash1, a Trithorax group protein. Like its counterpart in *Drosophila*⁴, ASH1L has been found to play a role in the regulation of Hox gene expression^{5,6}. The ASH1L bromodomain displays strong binding to various Lys(Ac) residues in singly acetylated histone peptide microarrays (histones H1.4K74Ac, H2AK36Ac, H2BK85Ac, H3K56Ac, H4K59Ac/K79Ac)⁷.

PURITY: >95% by SDS-PAGE

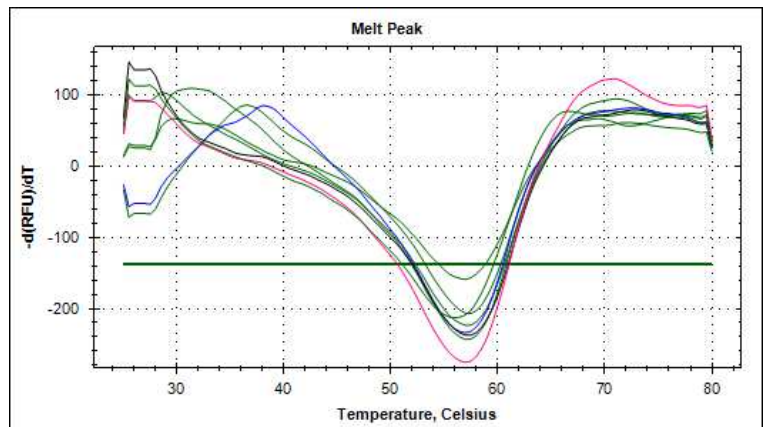
SUPPLIED AS: _ µg/µL in 50mM Tris HCl, pH 7.5, 500mM NaCl, 1mM TCEP, 10% glycerol (v/v) as determined by OD₂₈₀

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) Y Tanaka *et al. Gene* 2007 **397** 161; 2) S. An *et al. J. Biol. Chem.* 2011 **286** 8369; 3) D.S. Cabianca *et al. Cell* 2012 **149** 819; 4) C. Beisel *et al. Nature* 2002 **419** 857; 5) G. Gregory & *et al. Mol. Cell. Biol.* 2007 **27** 8466; 6) Y Tanaka *et al. PLOS One* 2011 **6** e28171; 7) P. Filippakopoulos *et al. Cell* 2012 **149** 214



Coomassie blue-stained SDS-PAGE (4-12% acrylamide) of 2 µg and 4 µg of RBC ASH1L-[BRD] (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 ASH1L-[BRD] (His) in the Presence or Absence of Common Bromodomain Ligands. Thermal denaturation of ASH1L-[BRD] (His) (0.2 mg/mL) is detected (CFX384 TMTouch thermal cycler, 'FRET' channel; Bio- Rad) by increased binding and fluorescence of the dye SYPRO[®]Orange (Life Technologies). Shown are the first derivatives of fluorescence vs. temperature plots in which the "peaks" indicate the T_m's (inflection points) of the original plots. None of the added ligands (JQ1, PF11, CBP112, Bromosporine, SGC-CBP30, BET151 or RVX-208; all 25 µM) stabilized the protein folding, as indicated by the absence of any substantial shift in the T_m from that of the solvent control (57°C, 0.25% DMSO).

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

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