PRODUCT INFORMATION

ASH2L (human recombinant)

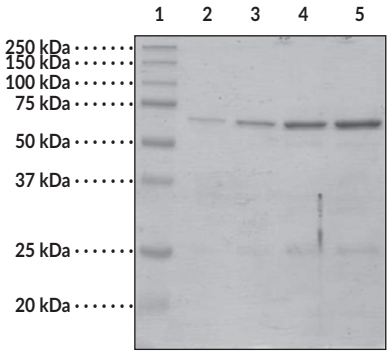
Item No. 10946

Overview and Properties

Synonyms:	Absent, small, or homeotic discs 2-like, Set1/Ash2 Histone Methyltransferase Complex Subunit Ash2 Isoform A
Source:	Recombinant protein expressed in *E. coli*. An N-terminal hexahistidine tag and SUMOpro tag were removed by cleavage with SUMO Protease 1 (Ulp1). *SUMOpro and SUMO Protease 1 were used under non-exclusive license from LifeSensors, Inc. www.lifesensors.com.*
Amino Acids:	96-628
Molecular Weight:	60.1 kDa
Storage:	-80°C (as supplied)
Stability:	≥6 months
Supplied in:	50 mM Tris, pH 8.0, with 150 mM sodium chloride and 20% glycerol
Protein Concentration:	***batch specific*** mg/ml
Activity:	Activity was demonstrated by a radiometric assay of the MLL1 complex (ASH2L, WDR5, RbBP5, and MLL1) (Cayman Item No. 10756) and MLL1 complex (ASH2L, WDR5, RbBP5, MLL1, and DPY30) (Cayman Item No. 10945) using [^{3}H]-S-adenosylmethionine and Core Histones (Cayman Item No. 11010) which specifically methylates Histone H3.

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Image



Lane 1: MW Markers
Lane 2: ASH2L (1 µg)
Lane 3: ASH2L (2 µg)
Lane 4: ASH2L (4 µg)
Lane 5: ASH2L (6 µg)

Representative gel image shown; actual purity may vary between each batch.

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM

PRODUCT INFORMATION

Description

ASH2L is the human homolog of the *Drosophila* absent, small or homeotic discs 2 (ash2) gene product, a member of the trithorax group (TrxG) of proteins.[1] The TrxG gene products in *Drosophila* and their mammalian homologs are responsible for controlling gene transcription. The ASH2L protein is a component of various multisubunit protein complexes, including the large complex of proteins associated with the SET1 (MLL) family of lysine methyltransferases.[2] ASH2L, along with WDR5 and RbBP5, form the human MLL1 core protein complex.[3] MLL1-5 protein complexes catalyze the di- and trimethylation of histone H3 at lysine 4 (H3K4me2/me3), leading to the maintenance of global H3K4 trimethylation.[4] Post-translational modifications of ASH2L have also been described showing methylation of Arg-296 by protein-arginine methyltransferease 1 (PRMT1) *in vitro* and in cells and by PRMT5 *in vitro*.[5] Further experimental evidence in rats suggests that ASH2L cooperates with Ha-RAS to transform rat embryonic fibroblasts, implicating ASH2L as a novel oncoprotein.[6]

References

1. Wang, J., Zhou, Y., Yin, B., *et al. J. Mol. Med.* **79(7)**, 399-405 (2001).
2. Steward, M.M., Lee, J.S., O'Donovan, A., *et al. Nat. Struct. Mol. Biol.* **13(9)**, 852-4 (2009).
3. Dou, Y., Milne, T.A., Ruthenburg, A.J., *et al. Nat. Struct. Mol. Biol.* **13(8)**, 713-9 (2006).
4. Wang, P., Lin, C., Smith, E.R., *et al. Mol. Cell. Biol.* **29(22)**, 6074-85 (2009).
5. Butler, J.S., Zurita-Lopez, Cl., Clarke, S.G., *et al. J. Biol. Chem.* **286(14)**, 12234-44 (2011).
6. Lüscher-Firzlaff, J., Gawlista, I., Vervoorts, J., *et al. Cancer Res.* **68(3)**, 749-58 (2008).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM