

# PRODUCT INFORMATION



## ASH1L bromodomain (human, recombinant)

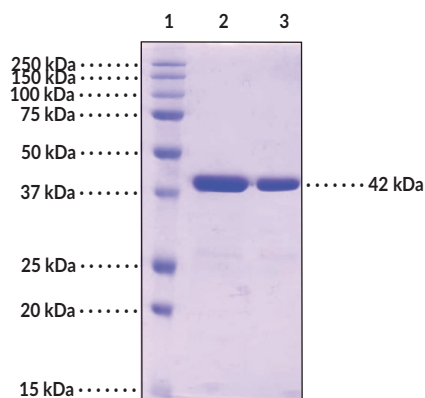
Item No. 14489

### Overview and Properties

<b>Synonyms:</b>	Absent, Small, or Homeotic Discs 1-like, ASH1-like, Histone Lysine Methyltransferase Complex Subunit, Histone Lysine Methyltransferase Complex Subunit
<b>Source:</b>	Recombinant N-terminal GST-tagged protein expressed in <i>E. coli</i>
<b>Amino Acids:</b>	2,438-2,561 (partial protein)
<b>Uniprot No.:</b>	Q9NR48
<b>Molecular Weight:</b>	42 kDa
<b>Storage:</b>	-80°C (as supplied)
<b>Stability:</b>	≥1 year
<b>Purity:</b>	<i>batch specific</i> (≥90% estimated by SDS-PAGE)
<b>Supplied in:</b>	50 mM Tris, pH 8.0, with 150 mM sodium chloride and 20% glycerol
<b>Protein Concentration:</b>	<i>batch specific</i> mg/ml

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

### Image



Lane 1: MW Markers

Lane 2: ASH1L bromodomain (5 µg)

Lane 3: ASH1L bromodomain (2.5 µg)

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

WARNING  
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA  
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY  
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 09/09/2024

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

---

The acetylation of histone lysine residues plays a crucial role in the epigenetic regulation of gene transcription. Acetylated lysine residues are recognized by a small protein domain known as a bromodomain.<sup>1</sup> These domains function in linking protein complexes to acetylated nucleosomes, thereby controlling chromatin structure and gene expression. Thus, bromodomains serve as “readers” of histone acetylation marks regulating the transcription of target promoters.<sup>2</sup> ASH1L is the mammalian homolog of the *Drosophila* protein Absent, small, or homeotic disc 1 (Ash1), a trithorax group histone methyltransferase involved in gene activation.<sup>3</sup> ASH1L contains an associated with SET domain, a SET domain, a post-SET domain, a bromodomain, a bromo-adjacent homology domain, and a plant homeodomain finger.<sup>3,4</sup> ASH1L regulates mammalian Hox gene expression, which plays an important role in haematopoietic development in mammals. ASH1L has been reported to methylate histone H3 at lysine 4 (H3K4) and H3K36.<sup>3,5,6</sup> This protein product contains the bromodomain region of ASH1L.

## References

---

1. Mujtaba, S., Zeng, L., and Zhou, M.M. Structure and acetyl-lysine recognition of the bromodomain. *Oncogene* **26**, 5521-5527 (2011).
2. Muller, S., Filippakopoulos, P., and Knapp, S. Bromodomains as therapeutic targets. *Expert Rev. Mol. Med.* **13**, 1-21 (2011).
3. An, S., Yeo, K.J., Jeon, Y.H., *et al.* Crystal structure of the human histone methyltransferase ASH1L catalytic domain and its implications for the regulatory mechanism. *J. Biol. Chem* **286(10)**, 8369-8374 (2011).
4. Nakamura, T., Blechman, J., Tada, S., *et al.* huASH1 protein, a putative transcription factor encoded by a human homologue of the *Drosophila* ash1 gene, localizes to both nuclei and cell-cell tight junctions. *PNAS* **97(13)**, 7284-7289 (2000).
5. Tanaka, Y., Kawahashi, K., Katagiri, Z.I., *et al.* Dual function of histone H3 lysine 36 methyltransferase ASH1 in regulation of Hox gene expression. *PLoS One* **6(11)**, (2011).
6. Gregory, G.D., Vakoc, C.R., Rozovskaia, T., *et al.* Mammalian ASH1L is a histone methyltransferase that occupies the transcribed region of active genes. *Molecular and Cellular Biology* **27(24)**, 8466-8479 (2007).

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