

ASH2L (2046D2a): sc-81184

BACKGROUND

The human ASH2L gene encodes a 628 amino acid protein known as ASH2L1, or isoform 1, which contains a nuclear localization signal and PHD finger motif, suggesting that the gene product functions as a transcription regulator. Alternative splicing results in a shorter isoform 2, designated ASH2L2, which is missing the first 94 amino acid residues found in ASH2L1. Human ASH2L proteins are 60% homologous to *Drosophila* ASH2, which positively regulates expression of certain genes in early development, and contain similar, but not identical, domains, including a zinc finger motif. ASH2L is highly expressed in fetal liver, testis and leukemia cell lines with erythroid and megakaryocytic potential, such as K-562, Hel and Dami. Differentiation inducers (e.g. phorbol ester and hemin) cause different expression patterns in these cells lines, suggesting that ASH2L plays a role in hematopoiesis and is associated with particular types of leukemia.

REFERENCES

1. Ikegawa, S., et al. 1999. Cloning and characterization of ASH2L and Ash2l, human and mouse homologs of the *Drosophila* ash2 gene. *Cytogenet. Cell Genet.* 84: 167-172.
2. Wang, J., et al. 2001. ASH2L: alternative splicing and downregulation during induced megakaryocytic differentiation of multipotential leukemia cell lines. *J. Mol. Med.* 79: 399-405.
3. Amoros, M., et al. 2002. The ash2 gene is involved in *Drosophila* wing development. *Int. J. Dev. Biol.* 46: 321-324.
4. Wysocka, J., et al. 2003. Human Sin3 deacetylase and trithorax-related Set1/Ash2 Histone H3-K4 methyltransferase are tethered together selectively by the cell-proliferation factor HCF1. *Genes Dev.* 17: 896-911.
5. Beltran, S., et al. 2003. Transcriptional network controlled by the trithorax-group gene ash2 in *Drosophila melanogaster*. *Proc. Natl. Acad. Sci. USA* 100: 3293-3298.

CHROMOSOMAL LOCATION

Genetic locus: ASH2L (human) mapping to 8p11.23; Ash2l (mouse) mapping to 8 A2.

SOURCE

ASH2L (2046D2a) is a mouse monoclonal antibody raised against a recombinant protein corresponding to an internal region of ASH2L of human origin.

PRODUCT

Each vial contains 100 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 1.0% stabilizer protein.

STORAGE

For immediate and continuous use, store at 4° C for up to one month. For sporadic use, freeze in working aliquots in order to avoid repeated freeze/thaw cycles. If turbidity is evident upon prolonged storage, clarify solution by centrifugation.

APPLICATIONS

ASH2L (2046D2a) is recommended for detection of ASH2L of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 µg per 1 x 10⁶ cells).

Suitable for use as control antibody for ASH2L siRNA (h): sc-43556, ASH2L siRNA (m): sc-77338, ASH2L shRNA Plasmid (h): sc-43556-SH, ASH2L shRNA Plasmid (m): sc-77338-SH, ASH2L shRNA (h) Lentiviral Particles: sc-43556-V and ASH2L shRNA (m) Lentiviral Particles: sc-77338-V.

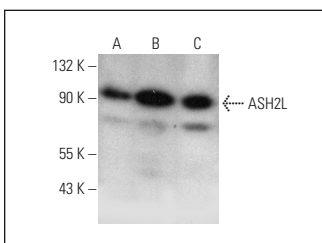
Molecular Weight of ASH2L: 80 kDa.

Positive Controls: ASH2L (m): 293T Lysate: sc-118586, HeLa whole cell lysate: sc-2200 or Jurkat whole cell lysate: sc-2204.

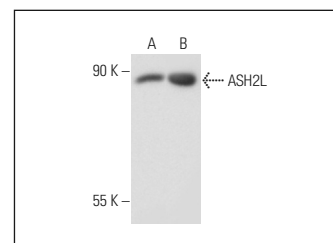
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



ASH2L (2046D2a): sc-81184. Western blot analysis of ASH2L expression in HeLa (A), HL-60 (B) and Jurkat (C) whole cell lysates.



ASH2L (2046D2a): sc-81184. Western blot analysis of ASH2L expression in non-transfected: sc-117752 (A) and mouse ASH2L transfected: sc-118586 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Wan, M., et al. 2013. The trithorax group protein ASH2L is essential for pluripotency and maintaining open chromatin in embryonic stem cells. *J. Biol. Chem.* 288: 5039-5048.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.