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# ASCL1 (Achaete-scute homolog 1) Antibody (C-term D220)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP2019d

## Product Information

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| **Application** | WB, E |
| **Primary Accession** | P50553 |
| **Other Accession** | Q90259, P19359, Q02067, NP_004307 |
| **Reactivity** | Human |
| **Predicted** | Mouse, Rat, Zebrafish |
| **Host** | Rabbit |
| **Clonality** | Polyclonal |
| **Isotype** | Rabbit IgG |
| **Clone Names** | RB10320 |
| **Calculated MW** | 25454 |

## Additional Information

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| **Gene ID** | 429 |
| **Other Names** | Achaete-scute homolog 1, ASH-1, hASH1, Class A basic helix-loop-helix protein 46, bHLHa46, ASCL1, ASH1, BHLHA46, HASH1 |
| **Target/Specificity** | This ASCL1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide selected from the C-terminal region of human ASCL1. |
| **Dilution** | WB~~1:1000 E~~Use at an assay dependent concentration. |
| **Format** | Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification. |
| **Storage** | Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles. |
| **Precautions** | ASCL1 (Achaete-scute homolog 1) Antibody (C-term D220) is for research use only and not for use in diagnostic or therapeutic procedures. |

## Protein Information

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| **Name** | ASCL1 ( HGNC:738) |
| **Function** | Transcription factor that plays a key role in neuronal differentiation: acts as |

a pioneer transcription factor, accessing closed chromatin to allow other factors to bind and activate neural pathways. Directly binds the E box motif (5'-CANNTG-3') on promoters and promotes transcription of neuronal genes. The combination of three transcription factors, ASCL1, POU3F2/BRN2 and MYT1L, is sufficient to reprogram fibroblasts and other somatic cells into induced neuronal (iN) cells in vitro. Plays a role at early stages of development of specific neural lineages in most regions of the CNS, and of several lineages in the PNS. Essential for the generation of olfactory and autonomic neurons. Acts synergistically with FOXN4 to specify the identity of V2b neurons rather than V2a from bipotential p2 progenitors during spinal cord neurogenesis, probably through DLL4-NOTCH signaling activation. Involved in the regulation of neuroendocrine cell development in the glandular stomach (By similarity).

**Cellular Location** Nucleus {ECO:0000250|UniProtKB:Q02067}.

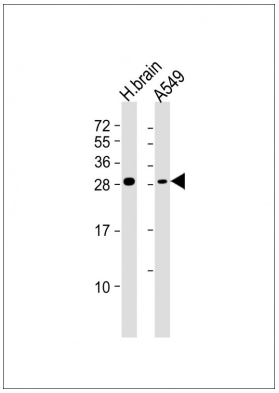
## Background

ACSL1, alternatively titled Hash1 or Mash1, is a member of the basic helix-loop-helix (BHLH) family of transcription factors. It activates transcription by binding to the E box (5'-CANNTG-3'). Dimerization with other BHLH proteins is required for efficient DNA binding. ACSL1 plays a role in the neuronal commitment and differentiation and in the generation of olfactory and autonomic neurons. The protein is highly expressed in medullary thyroid cancer and small cell lung cancer and may be a useful marker for these cancers. The presence of a CAG repeat in the gene suggests it may also play a role in tumor formation.

## References

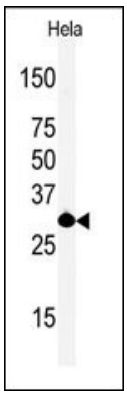
Sriuranpong, V., et al., Mol. Cell. Biol. 22(9):3129-3139 (2002).
Westerman, B.A., et al., Clin. Cancer Res. 8(4):1082-1086 (2002).
Chen, H., et al., Cell Growth Differ. 8(6):677-686 (1997).
Borges, M., et al., Nature 386(6627):852-855 (1997).
Renault, B., et al., Genomics 30(1):81-83 (1995).

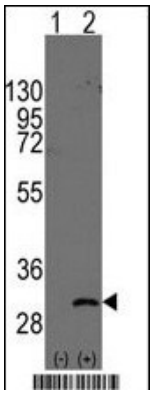
## Images




All lanes : Anti-Ascl1 (Human C-term) at 1:1000 dilution Lane 1: human brain lysate Lane 2: A549 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 25 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

Western blot analysis of anti-Ascl1 Antibody (C-term D220) (Cat. #AP2019d) in Hela cell line lysates (35ug/lane). Ascl1(arrow) was detected using the purified Pab (1:160 dilution).




Western blot analysis of Ascl1 (arrow) using rabbit polyclonal Ascl1 Antibody (Human C-term) (Cat.#AP2019d). 293 cell lysates (2 ug/lane) either nontransfected (Lane 1) or transiently transfected with the Ascl1 gene (Lane 2) (Origene Technologies).