

# ASCL3 (M-16): sc-169969

## BACKGROUND

Members of the myogenic determination family are basic helix-loop-helix (bHLH) proteins that can be separated into two classes, both of which work together to activate DNA transcription. Class A proteins include the ubiquitously expressed E-box binding factors, namely E2A, ITF-2 and HEB, while class B proteins, such as MyoD, myogenin and Neuro D (BETA2), are transiently expressed and exhibit a much more limited tissue distribution. Working in opposition to these positively acting factors are a specialized group of basic helix-loop-helix (bHLH) transcription factors that function as dominant negative regulators and are involved in cell lineage determination and differentiation. ASCL3 (achaete-scute homolog 3), also known as HASH3 or SGN1, is a 180 amino acid protein that localizes to the nucleus and contains one bHLH domain. Expressed in a wide variety of fetal and adult tissues, ASCL3 functions as a transcriptional repressor that inhibits myogenesis and is important for the development and differentiation of numerous tissues.

## REFERENCES

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- Amid, C., et al. 2001. Comparative genomic sequencing reveals a strikingly similar architecture of a conserved syntenic region on human chromosome 11p15.3 (including gene ST5) and mouse chromosome 7. *Cytogenet. Cell Genet.* 93: 284-290.
- Yoshida, S., et al. 2001. Sgn1, a basic helix-loop-helix transcription factor delineates the salivary gland duct cell lineage in mice. *Dev. Biol.* 240: 517-530.
- Jonsson, M., et al. 2004. Hash4, a novel human achaete-scute homologue found in fetal skin. *Genomics* 84: 859-866.
- Online Mendelian Inheritance in Man, OMIM<sup>™</sup>. 2005. Johns Hopkins University, Baltimore, MD. MIM Number: 609154. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
- Bullard, T., et al. 2008. Ascl3 expression marks a progenitor population of both acinar and ductal cells in mouse salivary glands. *Dev. Biol.* 320: 72-78.

## CHROMOSOMAL LOCATION

Genetic locus: Ascl3 (mouse) mapping to 7 E3.

## SOURCE

ASCL3 (M-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of ASCL3 of mouse origin.

## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-169969 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

ASCL3 (M-16) is recommended for detection of ASCL3 of mouse and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with other ASCL family members.

Suitable for use as control antibody for ASCL3 siRNA (h): sc-96320, ASCL3 siRNA (m): sc-141298, ASCL3 shRNA Plasmid (h): sc-96320-SH, ASCL3 shRNA Plasmid (m): sc-141298-SH, ASCL3 shRNA (h) Lentiviral Particles: sc-96320-V and ASCL3 shRNA (m) Lentiviral Particles: sc-141298-V.

Molecular Weight of ASCL3: 21 kDa.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker<sup>™</sup> compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz<sup>™</sup> Mounting Medium: sc-24941.

## RESEARCH USE

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