GENE BIO SOLUTION

MASH 1

Format	Catalog No.	Pack size	Dilution
Concentrated	GB3131A	0.1 mL	1:100
Prediluted	GB3131AA	6.0 mL	Ready to use

PRODUCT DESCRIPTION -

Achaete-scute complex homolog-1 (ASCL1), referred to as mASH1 in rodents and hASH1 in humans, is a basic helix-loop-helix transcription factor essential for neuroendocrine cell development. Neuroendocrine carcinomas may develop in various locations, including the lung, gastrointestinal system, prostate, and skin. High-grade, poorly differentiated neuroendocrine carcinomas are categorized as neuroendocrine carcinomas (NECs) and are differentiated from low-grade neuroendocrine tumors (NETs). Traditional neuroendocrine markers, including chromogranin and CD56, are unable to differentiate neuroendocrine carcinomas (NECs) from neuroendocrine tumors (NETs) . Research indicates that the mouse monoclonal antibody MASH1 [24B72D11.1] effectively stains hASH1 in human tissues and differentiates neuroendocrine cells (NECs) from neuroendocrine tumors (NETs) across many locations . MASH1 has demonstrated the ability to differentiate large cell neuroendocrine carcinomas (LCNECs) and small cell lung carcinomas (SCLCs) from other lung cancer subtypes . MASH1 has additionally been employed to distinguish small cell lung cancer from Merkel cell carcinoma. MASH1, although not a tissue-specific marker, may aid in differentiating neuroendocrine carcinomas from neuroendocrine tumors in poorly differentiated instances.

INTENDED USE -

Intended for In Vitro Diagnostic Applications MASH1 [24B72D11.1] is a mouse monoclonal antibody designed for laboratory applications to qualitatively identify human achaetescute complex homolog-1 protein using immunohistochemistry (IHC) in formalin-fixed paraffin-embedded (FFPE) human tissues. The clinical interpretation of any staining or its absence must be supplemented by morphological studies utilizing appropriate controls and assessed in conjunction with the patient's clinical history and other diagnostic tests by a skilled pathologist.

SUMMARY AND EXPLANATION -

Achaete-scute complex homolog-1 (ASCL1), referred to as mASH1 in mice and hASH1 in humans, is a basic helix-loop-helix transcription factor essential for the development of neuroendocrine cells .

Neuroendocrine carcinomas may develop in various locations, including the lung, gastrointestinal system, prostate, and skin. High-grade, poorly differentiated neuroendocrine carcinomas are categorized as neuroendocrine carcinomas (NECs) and are differentiated from low-grade neuroendocrine tumors (NETs) . Traditional neuroendocrine markers, including chromogranin and CD56, are unable to differentiate neuroendocrine carcinomas (NECs) from neuroendocrine tumors (NETs). Research indicates that the mouse monoclonal antibody MASH1 [24B72D11.1] labels hASH1 in human tissues and differentiates neuroendocrine cells (NECs) from neuroendocrine tumors (NETs) in many locations (3-5). MASH1 has been demonstrated to differentiate large cell neuroendocrine carcinomas (LCNECs) and small cell lung carcinomas (SCLCs) from other lung cancer subtypes. MASH1 has additionally been employed to distinguish small cell lung cancer from Merkel cell carcinoma. MASH1, although not a tissue-specific marker, may aid in differentiating neuroendocrine carcinomas from neuroendocrine tumors in poorly differentiated instances.

PRINCIPLE OF PROCEDURE -

Antigen detection in tissues and cells is a multi-step immunohistochemistry procedure. The first step attaches the primary antibody to its designated epitope. Following the tagging of the antigen with a primary antibody, a secondary antibody is introduced to attach to the primary antibody. An enzyme label is subsequently introduced to attach to the secondary antibody; the detection of the attached antibody is demonstrated by a colorimetric reaction.

SOURCE - Rabbit monoclona

SPECIES REACTIVITY - Human; others not tested

CLONE - 24B72D11.1

ISOTYPE - IgG1

PROTEIN CONCENTRATION - ~10 mg/ml. Call for lot specific Ig concentration.

EPITOPE/ANTIGEN -achaete-scute complex homolog-1

CELLULAR LOCALISATION - Nuclear

POSITIVE TISSUE CONTROL - Neuroendocrine tumor

KNOWN APPLICATIONS-Immunohistochemistry

30-40 min. At RT. Staining of formalin-fixed tissues requires heating tissue sections in between pH 7.4 - 9.0 for 45 min at 95°C followed by cooling at room temperature for 20 minutes.

SUPPLIED AS - Buffer with protein carrier and preservative

STORAGE AND STABILITY -
Store at 2°C to 8°C. Do not use after expiration date printed on vial. If reagents are stored under conditions other than those specified in the package insert, they must be verified by the user. Diluted reagents should be used promptly; any remaining reagent should be stored at 2°C to 8°C.

Materials required but not provided -

1) Positivetissuecontrol-Neuroendocrinetumor
2) Negativecontroltissue(internalorexternal)
3) Microscopeslidesandcoverslips
4) Stainingjarsorbaths
5) Timer
6) Xyleneorxylenesubstitute
7) Ethanolorreagentalcohol
8) Deionizedordistilledwater
9) Heatingequipmentorenzymefortissuepretreatmentstep
10) Detection system
11) Chromogen
12) Wash buffer
13) Hematoxylin
14) Antibody diluents
15) Peroxide block
16) Light microscope
17) Mounting medium

LIMITATIONS-

The optimum antibody dilution and protocols for a specific application can vary. These include, but are not limited to fixation, heat-retrieval method, incubation times, tissue section thickness and detection kit used. Due to the superior sensitivity of these unique reagents, the recommended incubation times and titers listed are not applicable to other detection systems, as results may vary. The data sheet recommendations and protocols are based on exclusive use of Genebio products. Ultimately, it is the responsibility of the investigator to determine optimal conditions.