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MUC5AC (Gastric Mucin); Clone 45M1

Catalog Number	Format	Volume
A00124-0002	(Ready-To-Use)	2 ml
A00124-0007	(Ready-To-Use)	7 ml
A00124-0025	(Ready-To-Use)	25 ml
A00124-C	(Concentrate)	1 ml

Intended Use

For In-Vitro Diagnostic Use. This antibody is intended for the qualitative visualization of the anatomical elements listed in the Specificity section. It is intended to be used within an Immunohistochemistry (IHC) procedure on formalin-fixed paraffin-embedded (FFPE) human tissue followed by visualization by light microscopy.

Description

Titer/Working Dilution: Ready-to-Use: No further dilution required.
Concentrate: Suggested dilution is 1:250

Species: Mouse
Immunogen: MUC5AC isolated from the fluid of an ovarian mucinous cyst from an O Le(a-b-) patient was used as immunogen to generate the MUC5AC antibody.

Clone: 45M1
Isotype: Mouse IgG1, Kappa
Format: Ready-To-Use antibody has been pre-titered and quality controlled to work on formalin-fixed paraffin-embedded as well as acetone fixed cryostat tissue sections. No further titration is required.

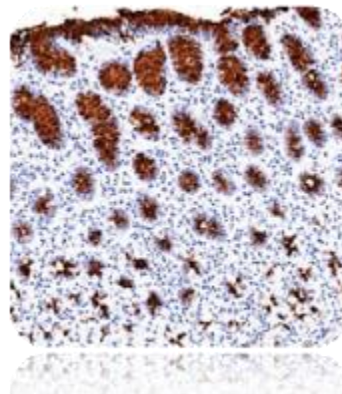
Specificity: MUC5AC is expressed in airway and gastric epithelial cells and highly expressed in colorectal carcinomas.

Background: MUC5AC (gastric mucin) belongs to the gel-forming mucin family of glycoproteins, the major components of the protective mucus layer on the mucosal surfaces of epithelial tissues. Mucus protects the tissue surface from mechanical damage, stabilizes the luminal microenvironment, and traps pathogens including bacteria and viruses for mucociliary clearance. MUC5AC, like other family members, is differentially expressed. MUC5AC is expressed in airway and gastric epithelial cells and highly expressed in colorectal carcinomas. Although not normally detected by antibody in adult colon, MUC5AC is detectable in fetal colon. It is thought that positive MUC5AC antibody staining in colorectal cancer may be due to the resurgence of MUC5AC expression or the unmasking of an embryonic MUC5AC antibody reactive epitope during tumorigenesis.

There are qualitative and quantitative alterations of MUC5AC expression in association with various pathological conditions. For example, S dysenteriae infection induced MUC5AC expression in HT29 cells which was inhibited by polymyxin B pretreatment (Raja et al, 2011). Antibody studies identified elevated MUC5AC levels in benign and malignant gallbladder lesions (Xiong et al, 2011). On the other hand, MUC5AC expression is decreased or has abnormal glycosylation in the goblet cells of conjunctiva in a number of eye inflammatory

conditions including Sjogren, Steven-Johnson and dry eye syndromes (Contreras-Ruiz, 2012).

The MUC5AC clone 45M1 antibody is widely used. For example, it has been used as part of an antibody panel to help distinguish esophageal adenocarcinoma (MUC5AC+) from squamous cell carcinoma (MUC5AC/-) (DiMaio et al, 2012).



Species Reactivity: Human, Monkey, Cat, Chicken, Hedgehog, Mouse, Pig, Rabbit, Rat. Does not react with cow.

Positive Control: Stomach
Cellular Localization: Cytoplasmic and cell surface.
Microbiological State: Nonsterile


Materials and Reagents Required but not Provided

1. Control tissue and reagents
 2. Xylene, graded alcohols, and deionized/distilled water
 3. Antibody Diluent.
 4. IHC detection system. Suggested: ScyTek Cat# ABZ125 "CRF Anti-Polyvalent HRP Polymer" and ScyTek Cat# ACV500 "DAB Chromogen/Substrate Kit (High Contrast)".
 5. Wash buffer for rinses (ScyTek Cat# TBT500)
 6. HIER Retrieval Solution
 7. Hematoxylin counterstain and bluing reagent (ScyTek Cat# HMM500 and BRT500)
 8. Mounting medium and coverslips
- Note:** ScyTek Laboratories has a wide range of IHC reagents and ancillaries that can be found at scytek.com.


Procedure

1. **Tissue Section Pretreatment (Highly Recommended):** Staining of formalin fixed paraffin embedded tissue sections is significantly enhanced by pretreatment with Tis-EDTA HIER Solution (10x) pH 9.0 (ScyTek catalog# TES500) or Citrate Plus (10x) HIER Solution (ScyTek catalog# CPL500)
2. **Primary Antibody Incubation Time:** We suggest an incubation period of 30 minutes at room temperature. However, depending upon the fixation conditions and the staining system employed, optimal incubation should be determined by the user.
3. **Visualization:** For maximum staining intensity we recommend the "CRF Anti-Polyvalent HRP Polymer" (ScyTek catalog# ABZ125, see IFU for instructions) combined with the "DAB Chromogen/Substrate Bulk Pack (High Contrast)" (ScyTek catalog# ACV500, see IFU for instructions).

Storage: 2° C  8° C

 ScyTek Laboratories, Inc.
205 South 600 West
Logan, UT 84321
U.S.A.




Emergo Europe
Westervoortsedijk 60
6827 AT Arnhem, The Netherlands

Storage and Stability

Do not Freeze. Store at 2-8°C. Return to 2-8° immediately after use. Do not use after expiration date printed on label. Verify visually that antibody has not been contaminated before use. Do not use if reagent becomes cloudy or precipitates.

Limitations


Immunohistochemistry is a complex technique involving both histological and immunological detection methods. Tissue processing and handling prior to immunostaining can cause inconsistent results. Variations in fixation and embedding or the inherent nature of the tissue specimen may cause variations in results. Endogenous peroxidase activity or pseudoperoxidase activity in erythrocytes and endogenous biotin may cause non-specific staining depending on detection system used. This data sheet's recommendations and procedures were validated using ScyTek IHC reagents and may not be suitable for other detection systems.

Precautions

1. Contains Sodium Azide as a preservative (0.09% w/v), do not ingest. Sodium Azide may react with lead and copper plumbing to form highly explosive metal azides. Upon disposal, flush with large volumes of water to prevent azide build-up in plumbing. This product contains no hazardous material at a reportable concentration according to U.S. 29 CFR 1910.1200, OSHA Hazardous Communication Standard and EC Directive 91/155/EC.
2. Do not pipette by mouth.
3. Avoid contact of reagents and specimens with skin and mucous membranes.
4. Avoid microbial contamination of reagents or increased nonspecific staining may occur.
5. The user must validate any procedures and recommendations that differ from this data sheet.
6. The SDS may be found at scytek.com

References**Warranty**

No products or "Instructions For Use (IFU)" are to be construed as a recommendation for use in violation of any patents. We make no representations, warranties or assurances as to the accuracy or completeness of information provided on our IFU or website. Our warranty is limited to the actual price paid for the product. ScyTek Laboratories, Inc. is not liable for any property damage, personal injury, time or effort or economic loss caused by our products.

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205 South 600 West
Logan, UT 84321
U.S.A.

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Westervoortsedijk 60
6827 AT Arnhem, The Netherlands