MUC1 (MRQ-17)

For In Vitro Diagnostic Use (IVD)
English: Instructions For Use

Presentation
Anti-MUC1 is a mouse monoclonal antibody from supernatant diluted in tris buffered saline, pH 7.3-7.7, with protein base, and preserved with sodium azide.

Applications
Mucins are high molecular weight glycoproteins which constitute the major component of the mucus layer that protects the gastric epithelium from chemical and mechanical aggressions. In humans, at least 14 mucin genes have been identified that code for the mucin proteins. They are designated as MUC1, MUC2, MUC3, MUC4, MUC5AC, MUC5B, MUC6, MUC7, MUC8, MUC9, MUC11, MUC12, MUC13, and MUC16.

The heterogeneous pattern of mucin expression, including the expression of the intestinal mucin MUC2, may provide new insights into the differentiation pathways of gastric carcinoma. Pinto-de-Sousa et al. have shown in a comprehensive study of gastric carcinomas evaluated for expression of several mucins (MUC1, MUC2, MUC5AC and MUC6) that: (1) mucin expression is associated with tumor type (MUC5AC with diffuse and infiltrative carcinomas and MUC2 with mucinous carcinomas) but not with the clinico-biological behavior of the tumors; and (2) mucin expression is associated with tumor location (MUC5AC with antrum carcinomas and MUC2 with cardia carcinomas), indirectly reflecting differences in tumor differentiation according to tumor location.

The following generalities apply to the patterns of Mucin expression:

MUC1 expression: apical surfaces of most epithelial cells in breast, GI, respiratory, and GU tracts.

Associated products: MUC2, MUC5AC, MUC6, TAG-72, MOC-31, CEA

Reactivity	Paraffin, frozen
Control	Breast, colon, associated adenocarcinomas
Visualization	Cytoplasmic
Stability	Up to 36 months; store at 2-8°C
Isotype	IgG_1

Antibody color does not affect performance

Description	Cat. No.	Dilution/Comments
0.1 ml, concentrate	290M-14	1:50 - 1:200*
0.5 ml, concentrate	290M-15	1:50 - 1:200*
1 ml, concentrate	290M-16	1:50 - 1:200*
1 ml, prediluted	290M-17	Ready to use
7 ml, prediluted	290M-18	Ready to use
Positive control slides	290S	5 slides/pack

P prediluted C concentrate

Preparation and Pretreatment
1. Cut 3-4 µm section of formalin-fixed paraffin-embedded tissue and place on positively charged slides; dry overnight at 58°C.
2. Deparaffinize, rehydrate, and epitope retrieve; the preferred method is the use of Heat Induced Epitope Retrieval (HIER) techniques using Cell Marque's Trilogy™ in conjunction with a pressure cooker. The preferred method allows for simultaneous deparaffinization, rehydration, and epitope retrieval. Upon completion, rinse with 5 changes of distilled or deionized water.
3. If using HRP detection system, place slides in peroxide block for 10 minutes; rinse. If using AP detection system, omit this step.

Recommended Protocol for Staining at Room Temperature Using CytoScan™ BSA Detection System
1. Apply the antibody and incubate for 30 - 60 minutes; rinse.
2. Apply the link and incubate for 10 minutes; rinse.
3. Apply the label and incubate for 10 minutes; rinse.
4. Apply ample amount of chromogen and incubate for 1 - 10 minutes; rinse.
5. Dehydrate and coverslip.

Recommended Protocol for Staining at Room Temperature Using PolyScan™ Polymer Detection System
1. Apply the antibody and incubate for 30 - 60 minutes; rinse.
2. Apply the PolyScan™ Polymer Rabbit/Mouse Detection System for 30 minutes; rinse.
3. Apply ample amount of chromogen and incubate for 1 - 10 minutes; rinse.
4. Dehydrate and coverslip.

References
1. Chaves P, Cruz C, Dias Pereira A, Suspiro A, de Almeida JC, Leitao CN, Soares J. Gastric and intestinal differentiation in Barrett's metaplasia and associated adenocarcinoma. Dis Esophagus. 2005;18(6):383-7.
2. Leteurtre E, Zerimech F, Piessen G, Wacrenier A, Leroy X, Copin MC, Mariette C, Aubert JP, Porchet N, Buisine MP. Relationships between mucinous gastric carcinoma, MUC2 expression and survival. World J Gastroenterol. 2006 Jun 7;12(21):3324-31.
3. Mino-Kenudson M, Tomita S, Lauwers GY. Mucin expression in reactive gastropathy: an immunohistochemical analysis. Arch Pathol Lab Med. 2007 Jan;131(1):86-90.
4. Mizoshita T, Tsukamoto T, Inada KI, Hirano N, Tajika M, Nakamura T, Ban H, Tatematsu M. Loss of MUC2 expression correlates with progression along the adenoma-carcinoma sequence pathway as well as de novo carcinogenesis in the colon. Histol Histopathol. 2007 Mar;22(3):251-60.
5. O'Connell FP, Wang HH, Odze RD. Utility of immunohistochemistry in distinguishing primary adenocarcinomas from metastatic breast carcinomas in the gastrointestinal tract. Arch Pathol Lab Med. 2005 Mar;129(3):338-47.

*The dilutions set forth above are estimates; actual results may differ because of variability in methods and protocols. Validation of antibody performance/protocol is the responsibility of the end user.

EC REP EMERGO EUROPE
Molenstraat 15, 2513 BH, The Hague, NL.

CE *Material Safety Data Sheet available upon request.*