# MUC5AC (CLH2)

| Format | Catalog No. | Pack size | Dilution |
|---|---|---|---|
| **Concentrated** | G0222 A, B, C | 0.1, 0.5, 1.0 mL | 1:100 - 200 |
| **Prediluted** | G0222 AA, BB | 6.0, 3.0 mL | Ready to use |

**ANTIBODY SPECIFICATIONS**

- **HOST SPECIES**: Mouse
- **CLONE**: CLH2
- **ISOTYPE**: IgG1
- **CELLULAR LOCALIZATION:** Cytoplasmic
- **IMMUNOGEN:** A synthetic peptide of the human MUC5AC tandem repeat protein.
- **MOLECULAR WEIGHT:** ~585 kDa
- **SPECIES REACTIVITY:** Human; others not tested
- **POSITIVE CONTROL:** Stomach, Colon, Kidney

**INTENDED USE**

This antibody is intended **for research use only (RUO)** and is not approved for diagnostic or therapeutic applications. It is optimized for the detection of MUC5AC protein in formalin-fixed, paraffin-embedded (FFPE) human tissues by immunohistochemistry (IHC).

**SUMMARY AND APPLICATION**

MUC5AC, another name for mucin 5AC, is a human gene. Normal colon cells do not have the Mucin 5AC antigen, however goblet cells of the foetal and precancerous colon and columnar mucous cells of the surface gastric epithelium do. The expression of mucin genes varies depending on the cell and tissue. MUC1 is found in the pyloric and oxynthic glands of the body region, as well as in the mucous cells of the gastric antrum's neck and surface epithelium. While MUC6 protein expression is restricted to the body's mucous neck cells and the antrum's pyloric glands, MUC5AC antibody is abundantly expressed in both the body and antrum's foveolar epithelium.

**SCIENTIFIC BACKGROUND:**

The expression pattern of mucin in gastric cancer varies. It contains the intestinal mucin MUC2 expressed from scratch as well as the mucins MUC1, MUC5AC, and MUC6 that are generally expressed in the stomach mucosa. New information on the differentiation pathways of gastric cancer may be revealed by the diverse pattern of mucin expression, which includes the expression of the intestinal mucin MUC2. It has been demonstrated that when the expression of multiple mucins (MUC1, MUC2, MUC5AC, and MUC6) in gastric cancers is assessed, mucin expression is linked to the type of tumour (MUC5AC in diffuse and infiltrative carcinomas and MUC2 in mucinous carcinomas) but not to the tumours' clinico-biological characteristics. Indirectly reflecting variations in tumour differentiation based on tumour location, mucin expression is linked to tumour location (MUC5AC with antrum carcinomas and MUC2 with cardiac carcinomas).

**RECOMMENDED USAGE**

- **IHC Protocol Highlights:**
  - Dilution: 1–2 µg/mL
  - Incubation: 30 minutes at room temperature
  - Antigen Retrieval: Heat in 10 mM Tris with 1 mM EDTA (pH 9.0) at 95°C for 45 minutes, followed by cooling
- **Specimen Type**: FFPE sections, preferably ~4 µm

**FORMULATION & STORAGE**:

- Buffer: 10 mM PBS, 0.05% BSA, 0.05% sodium azide
- Storage:
  - Dilution: 1–2 µg/Ml
  - Without azide: –20 to –80°C
- Shelf Life: 24 months under proper conditions
- Hazard Classification: Non-hazardous; no MSDS required

**LIMITATIONS**

- Interpretation must be made by a qualified pathologist
- Tissue fixation and handling may affect staining quality
- Negative results do not always indicate absence of antigen—consider panel testing

**PRECAUTIONS**

- Contains 0.05% sodium azide – avoid ingestion and contact with skin or mucosa
- Wear gloves and avoid contact with eyes or mucosa
- Do not use reagents past expiration or if packaging appears compromised
- Do not pipette by mouth or reuse slides/containers without proper sterilization

**TECHNICAL SUPPORT**

For technical assistance, please contact Genebio Solution's Technical Support at www.genebiosolution.com