

## anti-Human MUC1 Antibody | anti-MUC1 antibody

Anti-MUC1 [12D10]

| CATALOG # | REACTIVITY | APPLICATIONS                            |
|-----------|------------|-----------------------------------------|
| AAA72325  | Human      | Flow Cytometry, Functional Assay, ELISA |

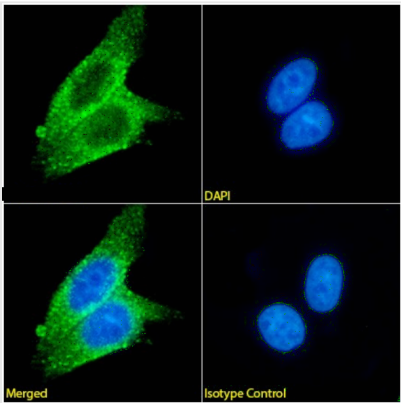
### PRODUCT SYNONYMS

MUC1; Anti-MUC1 [12D10]; Mucin-1; Breast carcinoma-associated antigen DF3; Cancer antigen 15-3; CA 15-3; Carcinoma-associated mucin; Episialin; H23AG; Krebs von den Lungen-6; KL-6; PEMT; Peanut-reactive urinary mucin; PUM; Polymorphic epithelial mucin; PEM; Tumor-associated epithelial membrane antigen; EMA; Tumor-associated mucin; CD227; anti-MUC1 antibody

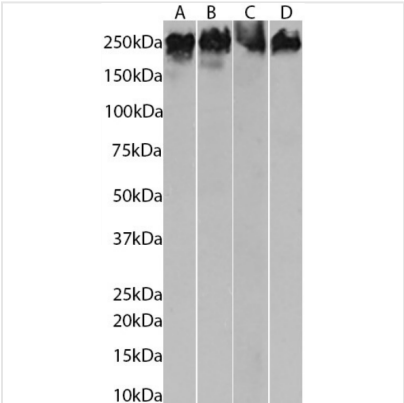
### PRODUCT SPECIFICATIONS

|                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Reactivity                                     | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Isotype                                        | Mouse IgG1 kappa                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Clone Number                                   | 12D10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Specificity                                    | This antibody is specific for the unsubstituted O-6 position of the Neu5Ac residue of MUC1. The alpha subunit of MUC1 has cell adhesive properties. Can act both as an adhesion and an anti-adhesion protein. May provide a protective layer on epithelial cells against bacterial and enzyme attack. The beta subunit of MUC-1 contains a C-terminal domain which is involved in cell signaling, through phosphorylations and protein-protein interactions. Modulates signaling in ERK, SRC and NF-kappa-B pathways. In activated T-cells, influences directly or indirectly the Ras/MAPK pathway. Promotes tumor progression. Regulates TP53-mediated transcription and determines cell fate in the genotoxic stress response. Binds, together with KLF4, the PE21 promoter element of TP53 and represses TP53 activity. |
| Purity/Purification                            | Purified. Protein A affinity purified                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Form/Format                                    | PBS with 0.02% Proclin 300.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Concentration                                  | 1mg/ml (varies by lot)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Applicable Applications for anti-MUC1 antibody | SPR (Surface Plasmon Resonance), FCM/FACS (Flow Cytometry), ELISA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Preparation and Storage                        | Store at 4 degree C for up to 3 months. For longer storage, aliquot and store at -20 degree C.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |

IMAGES



**IF (Immunofluorescence)**  
Immunofluorescence staining of MCF7 cells with anti-MUC1 antibody 12D10 . Immunofluorescence analysis of paraformaldehyde fixed MCF7 cells on Shi-fix™ coverslips stained with the chimeric rabbit IgG version of 12D10 (1:100 dilution) for 1h followed by Alexa Fluor 488 secondary antibody (1:1000 dilution), showing cytoplasmic staining. The nuclear stain is DAPI (blue). Panels show, from left-right, top-bottom,, DAPI, merged channels, and an isotype control. The isotype control was an unknown specificity antibody followed by staining with Alexa Fluor 488 secondary antibody.



**WB (Western Blot)**  
Western blot using anti-MUC1 antibody 12D10 . A431 (A) (0.1ug/ml), HeLa (B) (0.1ug/ml), MCF7 (C) (0.001ug/ml), and human breast cancer (D) (0.0003ug/ml) tissue lysate (35ug protein in RIPA buffer) were resolved via SDS-PAGE, and the subsequent blots were probed with the chimeric rabbit version of 12D10 at the mentioned respective concentrations before detection using an anti-rabbit secondary antibody. A primary incubation of 1 hour was used, and proteins were detected by chemiluminescence.

ADDITIONAL INFORMATION

|                                                    |                                                                                                                                                                                                                                                      |
|----------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Related Product Information for anti-MUC1 antibody | This antibody was raised by immunizing female Balb/c mice with MUC1 antigen. . In this study, using an MUC1 glycopeptide library, we established two novel anti-MUC1 monoclonal antibodies (1B2 and 12D10) with designed carbohydrate specificities. |
| Product Categories/Family for anti-MUC1 antibody   | cancer; oncology                                                                                                                                                                                                                                     |
| References                                         | Naito et al.<br>ACS Omega. 2017 Nov 30;2(11):7493-7505.                                                                                                                                                                                              |

NCBI AND UNIPROT INFORMATION

|                                  |                                                                                                                                                                                                                                                                 |
|----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| NCBI GI #                        | 67189007                                                                                                                                                                                                                                                        |
| NCBI GeneID                      | 4582                                                                                                                                                                                                                                                            |
| NCBI Accession #                 | NP_001018016.1                                                                                                                                                                                                                                                  |
| NCBI GenBank Nucleotide #        | NM_001018016.2                                                                                                                                                                                                                                                  |
| UniProt Accession #              | P15941; P13931; P15942; P17626; Q0VAP6; Q14128; Q14876; Q16437; Q16442; Q16615; B1AVQ8; B1AVR0                                                                                                                                                                  |
| Molecular Weight                 | 122,102 Da                                                                                                                                                                                                                                                      |
| NCBI Official Full Name          | mucin-1 isoform 2                                                                                                                                                                                                                                               |
| NCBI Official Synonym Full Names | mucin 1, cell surface associated                                                                                                                                                                                                                                |
| NCBI Official Symbol             | MUC1                                                                                                                                                                                                                                                            |
| NCBI Official Synonym Symbols    | EMA; PEM; PUM; KL-6; MAM6; PEMT; CD227; H23AG; MUC-1; CA 15-3; MUC-1/X; MUC1/ZD; MUC-1/SEC                                                                                                                                                                      |
| NCBI Protein Information         | mucin-1; episialin; DF3 antigen; H23 antigen; cancer antigen 15-3; krebs von den Lungen-6; mucin 1, transmembrane; tumor-associated mucin; carcinoma-associated mucin; polymorphic epithelial mucin; peanut-reactive urinary mucin; tumor associated epithelial |
| UniProt Protein Name             | Mucin-1                                                                                                                                                                                                                                                         |
| UniProt Gene Name                | MUC1                                                                                                                                                                                                                                                            |

|                            |                                                                          |
|----------------------------|--------------------------------------------------------------------------|
| UniProt Synonym Gene Names | PUM; MUC-1; CA 15-3; KL-6; PUM; PEM; EMA; MUC1-NT; MUC1-alpha; MUC1-beta |
| UniProt Entry Name         | MUC1_HUMAN                                                               |

**For Research Use Only.** Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://www.aaabiotech.com/human-antibody/muc1/72325>