abcam

# ab289665

# Anti-CA19-9 antibody [GT933]

## Key facts

| | |
|---|---|
| **Isotype** | IgG1 |
| **Host species** | Mouse |
| **Storage buffer** | Constituents: PBS, 20% Glycerol (glycerin, glycerine) |
| **Form** | Liquid |
| **Clonality** | Monoclonal |
| **Immunogen** | Chemical / Small Molecule corresponding to CA19-9. |
| **Clone number** | GT933 |
| **Purification technique** | Affinity purification Protein G |
| **Specificity** | This antibody specifically detects sialyl-Lewis $^{A}$ (CA 19-9), but not sialyl-Lewis $^{X}$ |
| **Concentration** | 1 mg/mL The concentration of this product may be batch-dependent<br>Batch concentration finder → |
| **Purification notes** | Purified from tissue culture supernatant. |

## Reactivity data

## ICC/IF

### Tested

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | 1/1000 |
| **Notes** | - |

## Flow Cyt

### Tested

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | 1/50 |
| **Notes** | - |

## WB

### Tested

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | 1/1000 |
| **Notes** | - |

## sELISA

### Tested

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | 1-5 µg/mL |
| **Notes** | Note: the detector antibody needs to be HRP-conjugated to work in this format. |

## IHC-P

### Tested

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | 1/500 |
| **Notes** | Perform heat-mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol. |

## cELISA

### Tested

| | |
|---|---|
| **Species** | Human |

| | |
|---|---|
| **Dilution info** | 0.33 µg/mL |
| **Notes** | - |

## Biochemical assay

### Tested

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | - |
| **Notes** | - |

## Target data

See full target information CA19-9

## Storage

| | |
|---|---|
| **Shipped at conditions** | Blue Ice |
| **Appropriate short-term storage duration** | 1-2 weeks |
| **Appropriate short-term storage conditions** | +4°C |
| **Appropriate long-term storage conditions** | -20°C |
| **Aliquoting information** | Upon delivery aliquot |
| **Storage information** | Avoid freeze / thaw cycle |

## Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

| | |
|---|---|
| **Activity summary** | CA19-9 also known as carbohydrate antigen 19-9 or sialyl-Lewis A is a glycoprotein with a molecular mass of around 210 kDa. This antigen is mainly expressed on the surface of epithelial cells in the pancreas liver gallbladder and stomach. It serves as a well-recognized tumor marker for cancers associated with these organs. CA19-9 can be detected using techniques like immunohistochemistry (IHC) aiding in diagnostic and research applications. |

| | |
|---|---|
| **Biological function summary** | CA19-9 plays a role in cell-cell communication and adhesion contributing to the behavior of cancer cells regarding metastasis and invasion. It is part of a broader complex involving glycoproteins which is important in cell surface recognition and signaling events. In normal cellular roles functions are less prominent but the alterations in cancerous cells highlight its biological significance in oncogenesis. |
| **Pathways** | CA19-9 interacts with several signal transduction pathways that influence cellular processes like proliferation and migration. Notably it is involved in the EGF receptor pathway affecting cellular growth and survival mechanisms. It relates to glycosylation pathways which together with other proteins such as MUC1 modify cellular membranes in malignant tissues influencing tumor progression and evasion from immune detection. |
| **Associated diseases and disorders** | CA19-9 frequently connects with pancreatic cancer and cholangiocarcinoma serving as a biomarker for diagnosis and monitoring disease progression. Its levels often increase in response to malignancies in these tissues. Studies suggest its interaction with proteins like CEACAM6 might enhance tumor invasiveness and metastasis. Identifying elevated CA19-9 can guide clinical decisions and therapeutic strategies in affected individuals. |

## Product promise

**Tested**

We have tested this species and application combination and it works. It is covered by our product promise.

**Expected**

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

**Predicted**

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

**Not recommended**

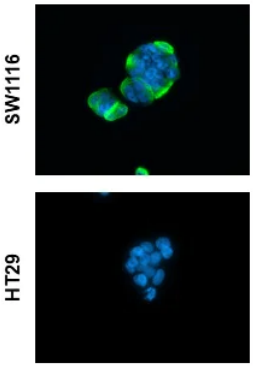
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

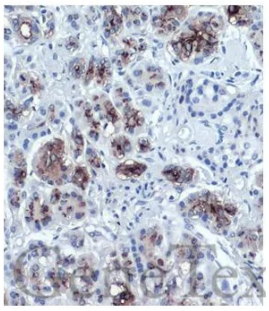
## 11 product images




## Immunocytochemistry/ Immunofluorescence - Anti-CA19-9 antibody [GT933] (ab289665)

CA19-9 Immunocytochemistry/ Immunofluorescence staining using mouse Anti-CA19-9 antibody

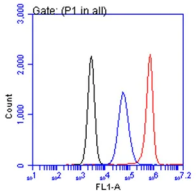
Paraformaldehyde-fixed (4% for 15 minutes) SW1116 (human colon adenocarcinoma cell line) and HT-29 (human colorectal adenocarcinoma cell line) cells were labeled for CA19-9 using ab289665 at 1/1000 dilution in ICC (Green). The nuclear counterstain is DAPI (Blue).
**Low expression control:** HT-29 cells.



## Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CA19-9 antibody [GT933] (ab289665)

CA19-9 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using mouse Anti-CA19-9 antibody

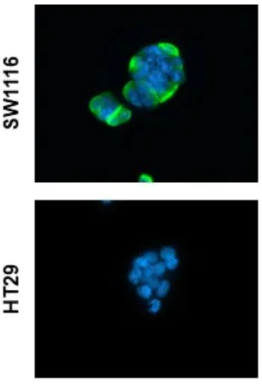
Immunohistochemical analysis of paraffin-embedded human pancreatic ductal adenocarcinoma tissue staining CA19-9 using ab289665 at 1/500 dilution.
Antigen retrieval: citrate buffer (pH 6.0) for 15 minutes.




## Flow Cytometry - Anti-CA19-9 antibody [GT933] (ab289665)

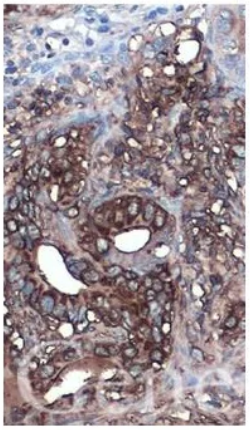
CA19-9 Flow Cytometry staining using mouse Anti-CA19-9 antibody

Flow cytometric analysis of COLO 205 (human colon adenocarcinoma cell line) cells labeling CA19-9 with ab289665 at 1/50 dilution (Red) as compared to unlabelled cells (Black) and a competitor antibody (Blue).
20 000 events were acquired for analysis.




## Immunocytochemistry/ Immunofluorescence - Anti-CA19-9 antibody [GT933] (ab289665)

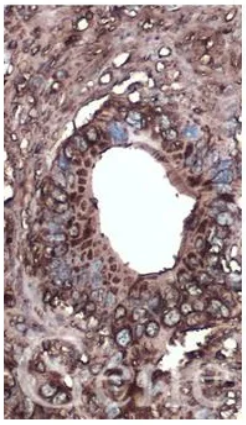
Paraformaldehyde-fixed (4% for 15 minutes) SW1116 (human colon adenocarcinoma cell line) and HT-29 (human colorectal adenocarcinoma cell line) cells were labeled for CA19-9 using ab289665 at 1/1000 dilution in ICC (Green). The nuclear counterstain is DAPI (Blue). Low expression control: HT-29 cells.



## Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CA19-9 antibody [GT933] (ab289665)

CA19-9 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using mouse Anti-CA19-9 antibody

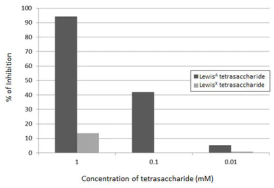
Immunohistochemical analysis of paraffin-embedded human pancreatic ductal adenocarcinoma tissue staining CA19-9 using ab289665 at 1/500 dilution.
Antigen retrieval: citrate buffer (pH 6.0) for 15 minutes.



## Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CA19-9 antibody [GT933] (ab289665)

CA19-9 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using mouse Anti-CA19-9 antibody

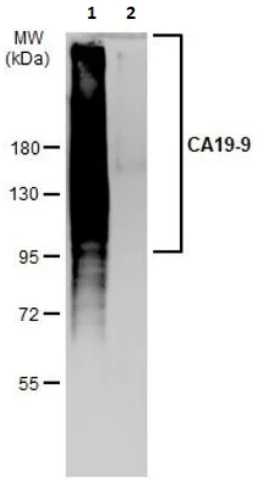
Immunohistochemical analysis of paraffin-embedded human pancreatic ductal adenocarcinoma tissue staining CA19-9 using ab289665 at 1/500 dilution.
Antigen retrieval: citrate buffer (pH 6.0) for 15 minutes.




## Competitive ELISA - Anti-CA19-9 antibody [GT933] (ab289665)

Competitive ELISA analysis of ab289665.
The binding of ab289665 (330 ng/mL) to immobilized recombinant HSA-CA19-9 (coated at 3 µg/mL) was measured in the presence of the indicated concentrations of soluble Lewis$^{A}$ or Lewis$^{X}$.

Bound antibody was detected using a Goat Anti-Mouse IgG antibody (HRP) at 1/10000 dilution.




## Western blot - Anti-CA19-9 antibody [GT933] (ab289665)

CA19-9 Western blot staining using mouse Anti-CA19-9 antibody

Cell extracts separated by 7.5% SDS-PAGE
All lanes:
Western blot - Anti-CA19-9 antibody [GT933] (ab289665) at 1/1000 dilution

Lane 1:
SW1116 (human adenocarcinoma cell line) whole cell extract at 30 µg

Lane 2:
HT-29 (human colorectal adenocarcinoma cell line) whole cell extract at 30 µg

Secondary

All lanes:
HRP-conjugated anti-mouse IgG antibody

Predicted band size: 32 kDa



## Biochemical assay - Anti-CA19-9 antibody [GT933] (ab289665)

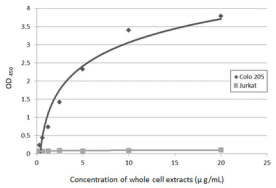
Glycan array analysis of ab289665.
ab289665 specifically detects Sialyl Lewis$^A$ (Neu5Ac-; CA19-9) on a glycan array (Green).

Sialyl Lewis$^A$ (Neu5Ac-; CA19-9): Green

Modified Sialyl Lewis (Neu5Gc): Red

Positive control : Yellow

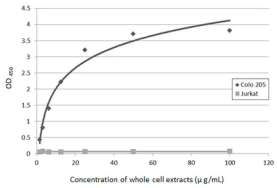
Negative control: Blue




## Sandwich ELISA - Anti-CA19-9 antibody [GT933] (ab289665)

Sandwich ELISA analysis of ab289665.
A CA19-9 antibody was used as capture antibody at 5 µg/mL, and HRP-conjugated version of ab289665 was used as detector antibody at 1 µg/mL.

Note: the detector antibody needs to be HRP-conjugated to work in this format.




## Sandwich ELISA - Anti-CA19-9 antibody [GT933] (ab289665)

Sandwich ELISA analysis of ab289665.
ab289665 was used as capture antibody at 5 µg/mL, and a different HRP-conjugated CA19-9 antibody was used as detector antibody at 1 µg/mL.

Note: the detector antibody needs to be HRP-conjugated to work in this format.

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