Anti-Cytokeratin 20 Antibody [A3D12]

EM1901-96

Product Type:	Mouse monoclonal IgG1, primary antibodies
Species reactivity:	Human
Applications:	WB, FC, IHC-P
Molecular Wt:	48 kDa
Clone number:	A3D12

Description: The protein encoded by this gene is a member of the keratin family. The keratins are intermediate filament proteins responsible for the structural integrity of epithelial cells and are subdivided into cytokeratins and hair keratins. The type I cytokeratins consist of acidic proteins which are arranged in pairs of heterotypic keratin chains. This cytokeratin is a major cellular protein of mature enterocytes and goblet cells and is specifically expressed in the gastric and intestinal mucosa. Keratin 20 is a type I cytokeratin. It is a major cellular protein of mature enterocytes and goblet cells and is specifically found in the gastric and intestinal mucosa. In immunohistochemistry, antibodies to CK20 can be used to identify a range of adenocarcinoma arising from epithelia that normally contain the CK20 protein. For example, the protein is commonly found in colorectal cancer, transitional cell carcinomas and in Merkel cell carcinoma, but is absent in lung cancer, prostate cancer, and non-mucinous ovarian cancer. It is often used in combination with antibodies to CK7 to distinguish different types of glandular tumour.

Immunogen: Synthetic peptide within Human Cytokeratin 20 aa 29-78 / 424.

Positive control: Lovo cell lysates, human small intestine tissue, human colon carcinoma tissue, human stomach carcinoma tissue, JAR.

Subcellular location: Cytoplasm.

Database links: SwissProt: P35900 Human

Recommended Dilutions:

WB	1:500-1:1,000
FC	1:50-1:100

Storage Buffer: 1*PBS (pH7.4), 0.2% BSA, 50% Glycerol. Preservative: 0.05% Sodium Azide.

Storage Instruction: Store at +4℃ after thawing. Aliquot store at -20℃. Avoid repeated freeze / thaw cycles.

Purity: Protein G affinity purified.

Images

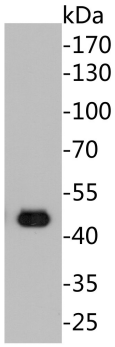

Fig1: Western blot analysis of Cytokeratin 20 on Lovo cell lysates. Proteins were transferred to a PVDF membrane and blocked with 5% BSA in PBS for 1 hour at room temperature. The primary antibody (EM1901-96, 1/500) was used in 5% BSA at room temperature for 2 hours. Goat Anti-Mouse IgG - HRP Secondary Antibody (HA1006) at 1:5,000 dilution was used for 1 hour at room temperature.

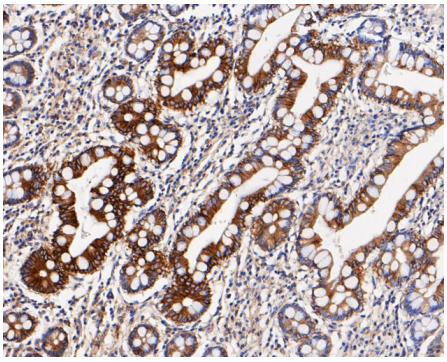

Fig2: Immunohistochemical analysis of paraffin-embedded human small intestine tissue using anti-Cytokeratin 20 antibody. The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 8.0-8.4) for 20 minutes.The tissues were blocked in 5% BSA for 30 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (EM1901-96, 1/400) for 30 minutes at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

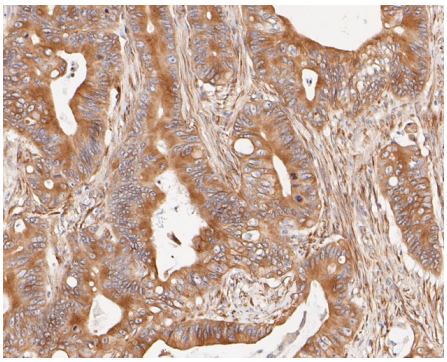

Fig3: Immunohistochemical analysis of paraffin-embedded human colon carcinoma tissue using anti-Cytokeratin 20 antibody. The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 8.0-8.4) for 20 minutes.The tissues were blocked in 5% BSA for 30 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (EM1901-96, 1/500) for 30 minutes at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

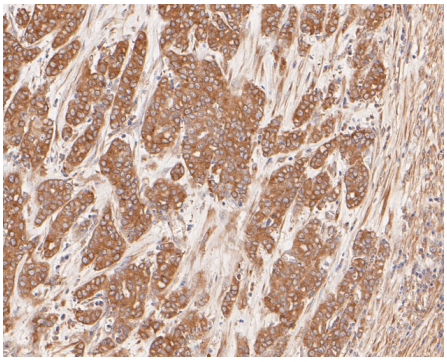

Fig4: Immunohistochemical analysis of paraffin-embedded human stomach carcinoma tissue using anti-Cytokeratin 20 antibody. The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 8.0-8.4) for 20 minutes.The tissues were blocked in 5% BSA for 30 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (EM1901-96, 1/500) for 30 minutes at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

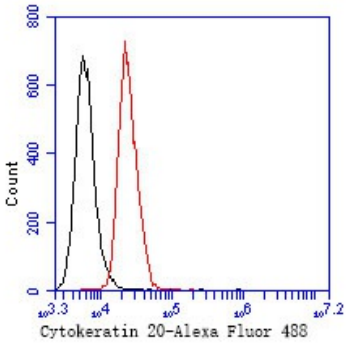

Fig5: Flow cytometric analysis of Cytokeratin 20 was done on JAR cells. The cells were fixed, permeabilized and stained with the primary antibody (EM1901-96, 1/50) (red). After incubation of the primary antibody at room temperature for an hour, the cells were stained with a Alexa Fluor 488-conjugated Goat anti-Mouse IgG Secondary antibody at 1/1000 dilution for 30 minutes.Unlabelled sample was used as a control (cells without incubation with primary antibody; black).

Note: All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE".

Background References

1. You X et. al. Aberrant Cytokeratin 20 mRNA Expression in Peripheral Blood and Lymph Nodes Indicates Micrometastasis and Poor Prognosis in Patients With Gastric Carcinoma. Technol Cancer Res Treat. 2019 Jan.
2. Al-Maghrabi J. et. al. Immunohistochemical staining of cytokeratin 20 and cytokeratin 7 in colorectal carcinomas: Four different immunostaining profiles. Saudi J Gastroenterol. 2018 Mar-Apr.