Anti-Cytokeratin 19 Antibody [A3D1-R]

HA601258

Product Type:	Recombinant Mouse monoclonal IgG1, primary antibodies
Species reactivity:	Human
Applications:	WB, IF-Cell, IHC-P, FC
Molecular Wt:	Predicted band size: 44 kDa
Clone number:	A3D1-R

Description: The keratin gene family is a large group of intermediate filament and structural proteins that provide the structural components of hair, nails, horns, scales, claws and similar types of hard tissues. Keratins are also important for intracellular stability in epithelial tissues and different keratins often display organ- or tissue specific expression patterns. Due to these specific expression patterns, keratins are often used as diagnostic biomarkers. Keratin 19 is a type I keratin and expressed in simple epithelia including glandular cell types present in the GI-tract, female tissues, male tissues, and respiratory epithelium. Clinically, keratin 19 is used together with keratin 18 to distinguish hepatocellular cancer from cholangiocellular carcinoma (both keratins are expressed in bile ducts, but keratin 18 is expressed in hepatocytes whereas keratin 19 is not). Keratin 19 is a type I keratin. The type I cytokeratins consist of acidic proteins which are arranged in pairs of heterotypic keratin chains. Unlike its related family members, this smallest known acidic cytokeratin is not paired with a basic cytokeratin in epithelial cells. It is specifically found in the periderm, the transiently superficial layer that envelops the developing epidermis. The type I cytokeratins are clustered in a region of chromosome 17q12-q21.

Immunogen:	Recombinant protein within Human Keratin 19 aa 128-322.
Positive control:	SK-Br-3 cell lysate, MCF7 cell lysate, MCF7, human liver tissue, human small intestine tissue.
Subcellular location:	Cytoskeleton, Cytosol.
Database links:	SwissProt: P08727 Human
Recommended Dilutions:	
WB	1:1,000
IF-Cell	1:200
IHC-P	1:1,000
FC	1:1,000
Storage Buffer:	PBS (pH7.4), 0.1% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.
Storage Instruction:	Store at +4℃ after thawing. Aliquot store at -20℃. Avoid repeated freeze / thaw cycles.
Purity:	Protein A affinity purified.

Images

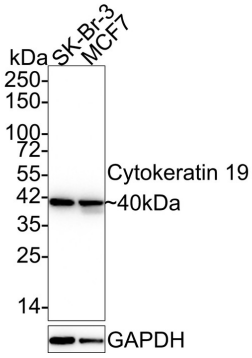

Fig1: Western blot analysis of Cytokeratin 19 on different lysates with Mouse anti-Cytokeratin 19 antibody (HA601258) at 1/1,000 dilution.

Lane 1: SK-Br-3 cell lysate
Lane 2: MCF7 cell lysate

Lysates/proteins at 20 µg/Lane.

Predicted band size: 44 kDa
Observed band size: 40 kDa

Exposure time: 24 seconds;

4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (HA601258) at 1/1,000 dilution was used in 5% NFDM/TBST at 4℃ overnight. Goat Anti-Mouse IgG - HRP Secondary Antibody (HA1006) at 1/50,000 dilution was used for 1 hour at room temperature.

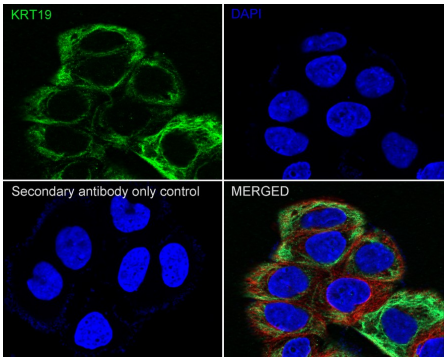

Fig2: Immunocytochemistry analysis of MCF7 cells labeling Cytokeratin 19 with Mouse anti-Cytokeratin 19 antibody (HA601258) at 1/200 dilution.

Cells were fixed in 4% paraformaldehyde for 20 minutes at room temperature, permeabilized with 0.1% Triton X-100 in PBS for 5 minutes at room temperature, then blocked with 1% BSA in 10% negative goat serum for 1 hour at room temperature. Cells were then incubated with Mouse anti-Cytokeratin 19 antibody (HA601258) at 1/200 dilution in 1% BSA in PBST overnight at 4 ℃. Goat Anti-Mouse IgG H&L (iFluor™ 488, HA1125) was used as the secondary antibody at 1/1,000 dilution. PBS instead of the primary antibody was used as the secondary antibody only control. Nuclear DNA was labelled in blue with DAPI.

beta Tubulin (ET1602-4, red) was stained at 1/100 dilution overnight at +4℃. Goat Anti-Rabbit IgG H&L (iFluor™ 594, HA1122) were used as the secondary antibody at 1/1,000 dilution.

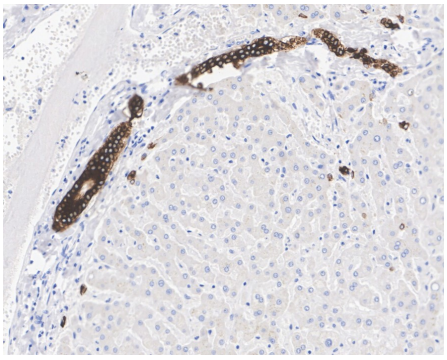

Fig3: Immunohistochemical analysis of paraffin-embedded human liver tissue with Mouse anti-Cytokeratin 19 antibody (HA601258) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA601258) at 1/1,000 dilution for 1 hour 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.

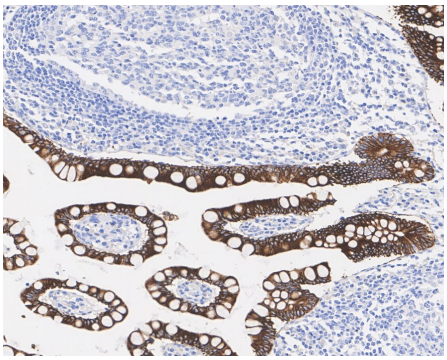

Fig4: Immunohistochemical analysis of paraffin-embedded human small intestine tissue with Mouse anti-Cytokeratin 19 antibody (HA601258) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA601258) at 1/1,000 dilution for 1 hour 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.

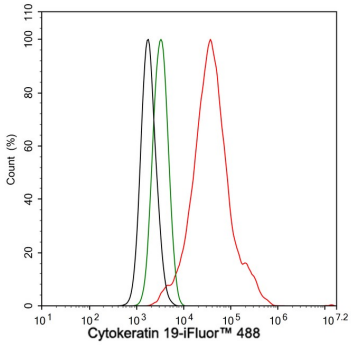

Fig5: Flow cytometric analysis of MCF7 cells labeling Cytokeratin 19.

Cells were fixed and permeabilized. Then stained with the primary antibody (HA601258, 1μg/mL) (red) compared with Mouse IgG1 Isotype Control (green). After incubation of the primary antibody at +4℃ for an hour, the cells were stained with a iFluor™ 488 conjugate-Goat anti-Mouse IgG Secondary antibody (HA1125) at 1/1,000 dilution for 30 minutes at +4℃. Unlabelled sample was used as a control (cells without incubation with primary antibody; black).

Background References

1. Stone M.R.et.al.Specific interaction of the actin-binding domain of dystrophin with intermediate filaments containing keratin 19.Mol. Biol. Cell 16:4280-4293(2005).