iFluor™ 488 Conjugated Anti-Cytokeratin 19 Antibody [SA30-06]

HA720140F

Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human, Mouse
Applications:	IF-Cell, IF-Tissue, FC
Molecular Wt:	Predicted band size: 44 kDa
Clone number:	SA30-06

Description:

Cytokeratins comprise a diverse group of intermediate filament proteins (IFPs) that are expressed as pairs in both keratinized and non-keratinized epithelial tissue. Cytokeratins play a critical role in differentiation and tissue specialization and function to maintain the overall structural integrity of epithelial cells and have been found to be useful markers of tissue differentiation, which is directly applicable to the characterization of malignant tumors. For example, many types of cancer cells express Cytokeratin 19 (CK19), an epithelial cytoskeletal protein within the suprabasal squamous epithelium. Cytokeratin 19 is a specific marker of moderate to severe dysplasia and carcinoma in situ in oral cavity squamous epithelium, and measurement of Cytokeratin 19 may be a useful marker in diagnosing hepatoma. Cytokeratin 19 fragment levels in serum have been documented as a marker for lung cancer. Clinical investigations have suggested that serum CYFRA 21-1, a fragment of Cytokeratin 19, may be among the most useful tumor markers.

Conjugate:	iFluor™ 488, Ex: 491nm; Em: 516nm.
Immunogen:	Synthetic peptide within Human Cytokeratin 19 aa 348-400.
Positive control:	MCF-7, SK-Br-3, human breast tissue.
Subcellular location:	Cytoskeleton.
Database links:	SwissProt: P08727 Human | P19001 Mouse

Recommended Dilutions:

IF-Cell	1:100
IF-Tissue	1:100
FC	1ug/mL

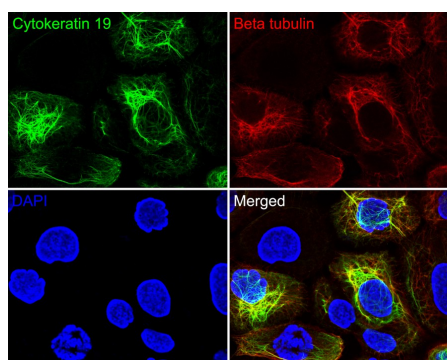|	
Storage Buffer:	Preservative: 0.02% Sodium azide Constituents: 30% Glycerol, 1% BSA, 68.98% PBS
Storage Instruction:	Store at +4℃ after thawing. Aliquot store at -20℃. Avoid repeated freeze / thaw cycles.
Purity:	Protein A affinity purified.

Images

Fig1: Immunocytochemistry analysis of MCF-7 cells labeling Cytokeratin 19 with Rabbit anti-Cytokeratin 19 antibody (HA720140F) at 1/100 dilution.

Cells were fixed in 100% methanol for 10 minutes, permeabilized with 0.1% Triton X-100 in PBS for 15 minutes, and then blocked with 1% BSA for 30 minutes at room temperature. Cells were then incubated with Rabbit anti-Cytokeratin 19 antibody (HA720140F) at 1/100 dilution in 1% BSA overnight at 4 ℃. Nuclear DNA was labelled in blue with DAPI.

Beta tubulin (M1305-2, red) was stained at 1/200 dilution overnight at +4℃. Goat Anti-Mouse IgG H&L (iFluor™ 594, HA1126) were used as the secondary antibody at 1/800 dilution.
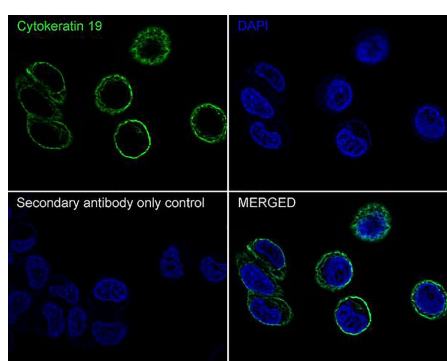

Fig2: Immunocytochemistry analysis of SK-Br-3 cells labeling Cytokeratin 19 with Rabbit anti-Cytokeratin 19 antibody (HA720140F) at 1/50 dilution.

Cells were fixed in 100% methanol for 10 minutes, permeabilized with 0.1% Triton X-100 in PBS for 15 minutes, and then blocked with 1% BSA for 30 minutes at room temperature. Cells were then incubated with Rabbit anti-Cytokeratin 19 antibody (HA720140F) at 1/50 dilution in 1% BSA overnight at 4 ℃. Nuclear DNA was labelled in blue with DAPI.
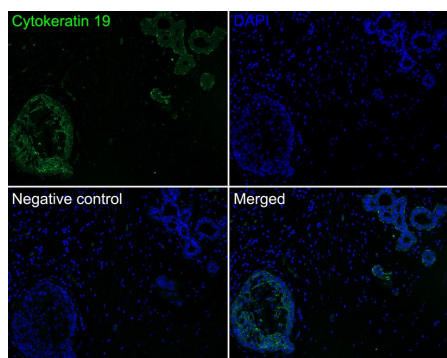

Fig3: Immunofluorescence analysis of paraffin-embedded human breast tissue labeling Cytokeratin 19 (HA720140F).

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 10% negative goat serum for 1 hour at room temperature, washed with PBS. And then probed with the primary antibody Cytokeratin 19 (HA720140F, iFluor™ 488) at 1/100 dilution overnight at 4 ℃, washed with PBS. DAPI was used as nuclear counterstain.
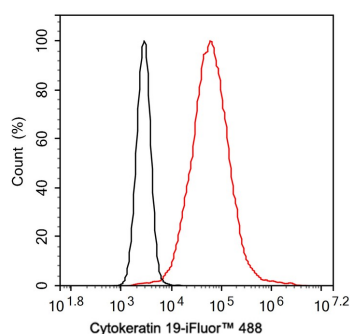

Fig4: Flow cytometric analysis of SK-Br-3 cells labeling Cytokeratin 19.

Cells were fixed and permeabilized. Then incubated for 1 hour at +4℃ with Cytokeratin 19 (HA720140F, red, 1ug/ml). 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. Guye P. et. al. Genetically engineering self-organization of human pluripotent stem cells into a liver bud-like tissue using Gata6. Nat Commun 7:10243 (2016).

2. Cui M. et. al. PTEN is a potent suppressor of small cell lung cancer. Mol Cancer Res 12:654-9 (2014).