iFluor™ 488 Conjugated Anti-Cytokeratin 7 Antibody [ST50-05]

HA720131F

Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human, Mouse
Applications:	IF-Tissue, IF-Cell, FC
Molecular Wt:	Predicted band size: 51 kDa
Clone number:	ST50-05

Description: Cytokeratins comprise a diverse group of intermediate filament proteins (IFPs) that are expressed as pairs in both keratinized and non-keratinized epithelial tissue, where they constitute up to 85% of mature keratinocytes in the vertebrate epidermis. Cytokeratins play a critical role in differentiation and tissue specialization and function to maintain the overall structural integrity of epithelial cells. The a-helical coiled-coil dimers associate laterally end-to-end to form 10 nm diameter filaments. Cytokeratins are useful markers of tissue differentiation and, in addition, they aid in the characterization of malignant tumors. Cytokeratin 7 (also known as sarcolectin) agglutinates normal and transformed cells with a high affinity for simple sugars. Cytokeratin 7 also inhibits the synthesis of interferon-dependent secondary proteins thus reversing the antiviral effect of interferon induction and restoring cells to their status ad primum. In normal and transformed cells, Cytokeratin 7 localizes to the membrane.

Conjugate: iFluor™ 488, Ex: 491nm; Em: 516nm.

Immunogen: Synthetic peptide within Human Cytokeratin 7 aa 18-67.

Positive control: Human liver tissue, A431, human breast tissue, SK-Br-3.

Subcellular location: Cytoplasm.

Database links: SwissProt: P08729 Human

Recommended Dilutions:

IF-Tissue	1:200
IF-Cell	1:100
FC	1:500-1:1,000

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

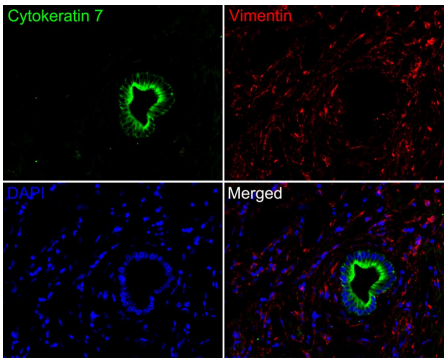

Fig1: Immunofluorescence analysis of paraffin-embedded human liver tissue labeling Cytokeratin 7 (HA720131F) and Vimentin (EM0401).

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 antibodies Cytokeratin 7 (HA720131F, green) at 1/200 dilution and Vimentin (EM0401, red) at 1/1,000 dilution overnight at 4 ℃, washed with PBS.

iFluor™ 594 conjugate-Goat anti-Mouse IgG (HA1126) was used as the secondary antibody at 1/1,000 dilution. DAPI was used as nuclear counterstain.

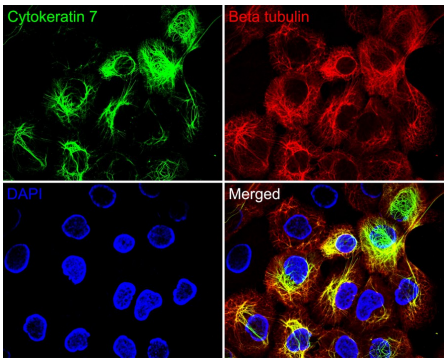

Fig2: Immunocytochemistry analysis of A431 cells labeling Cytokeratin 7 with Rabbit anti-Cytokeratin 7 antibody (HA720131F) at 1/100 dilution.

Cells were fixed in 4% paraformaldehyde for 15 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 7 antibody (HA720131F) 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.

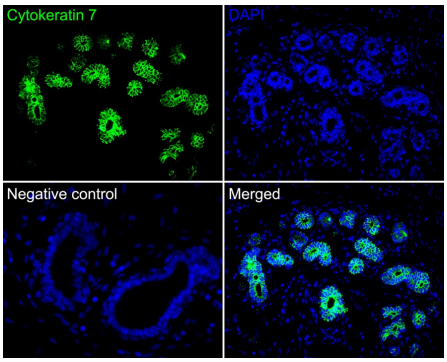

Fig3: Immunofluorescence analysis of paraffin-embedded human breast tissue labeling Cytokeratin 7 (HA720131F).

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 7 (HA720131F, iFluor™ 488) at 1/200 dilution overnight at 4 ℃, washed with PBS. DAPI was used as nuclear counterstain.

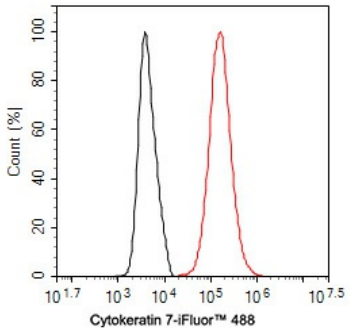

Fig4: Flow cytometric analysis of SK-Br-3 cells labeling Cytokeratin 7.

Cells were fixed and permeabilized. Then incubated for 1 hour at +4℃ with Cytokeratin 7 (HA720131F, 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. Hrudka J. et al. Cytokeratin 7 expression as a predictor of an unfavorable prognosis in colorectal carcinoma. Sci Rep. 2021 Sep
2. Statz E. et al. Cytokeratin 7, GATA3, and SOX-10 is a Comprehensive Panel in Diagnosing Triple Negative Breast Cancer Brain Metastases. Int J Surg Pathol. 2021 Aug