iFluor™ 488 Conjugated Anti-Cytokeratin 5 Antibody [SC62-04]

HA720129F

Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human
Applications:	IF-Tissue, IF-Cell
Molecular Wt:	Predicted band size: 62 kDa
Clone number:	SC62-04

Description: Cytokeratin 5 is commonly found in the cells on the outermost layer of skin in humans and animals. It is encoded by the KRT5 gene and pairs with the type I keratin K14. Cytokeratin 5 has become an important biomarker for different types of cancer, including mesothelioma, breast cancer and lung cancer. It helps differentiate squamous carcinomas from adenocarcinomas. Pathologists use cytokeratin 5 to distinguish mesothelioma from adenocarcinoma, the most common type of lung cancer. Cytokeratin 5/6 cannot identify mesothelioma on its own. Cytokeratin 5/6 is a positive marker for malignant pleural mesothelioma, found in more than three-fourths of cases. It is also found in certain types of lung cancers and breast cancers. Pathologists use cytokeratin 5/6 to stain cancer tissue samples. Cytokeratin 5/6 immunoreactivity is rarely seen in adenocarcinomas of the lung. If a tumor sample shows strong expression of cytokeratin 5/6, it gives pathologists a hint the tumor is malignant mesothelioma rather than a metastatic adenocarcinoma. However, this marker is not effective for all cell types of mesothelioma. Cytokeratin 5/6 staining is usually weak or negative for sarcomatoid mesothelioma, the least common and hardest-to-treat cell type of the asbestos-related cancer. The marker is also not effective in telling the difference between pleural mesothelioma and squamous cell carcinomas. About 25 to 30 percent of all lung cancers are squamous cell carcinomas.

Conjugate:	iFluor™ 488, Ex: 491nm; Em: 516nm.
Immunogen:	Synthetic peptide within human Cytokeratin 5 aa 70-110.
Positive control:	Human skin tissue, A431.
Subcellular location:	Cytoplasm.
Database links:	SwissProt: P13647 Human
Recommended Dilutions:	
IF-Tissue	1:100-1:200
IF-Cell	1:100
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

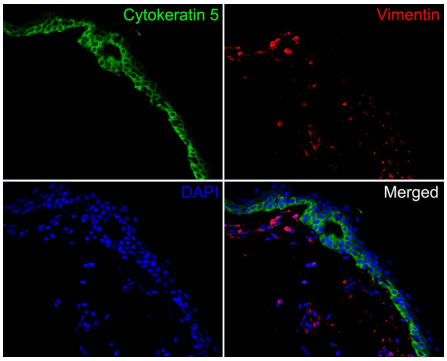

Fig1: Immunofluorescence analysis of paraffin-embedded human skin tissue labeling Cytokeratin 5 (HA720129F) and Vimentin (EM0401).

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 5 (HA720129F, 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.

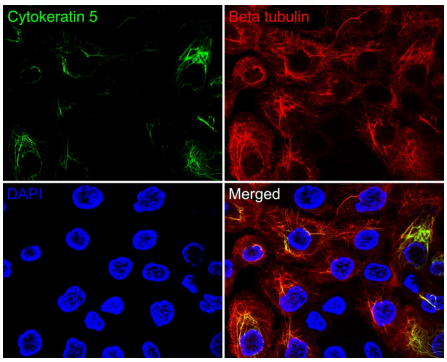

Fig2: Immunocytochemistry analysis of A431 cells labeling Cytokeratin 5 with Rabbit anti-Cytokeratin 5 antibody (HA720129F) at 1/100 dilution.

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 5 antibody (HA720129F) 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) was used as the secondary antibody at 1/800 dilution.

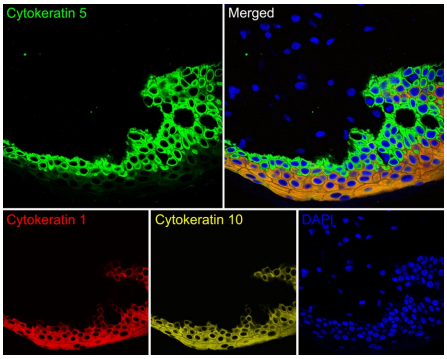

Fig3: Immunofluorescence analysis of paraffin-embedded human skin tissue labeling Cytokeratin 5 (HA720129F), Cytokeratin 1 (HA720141F) and Cytokeratin 10 (HA720119F).

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 5 (HA720129F, green) at 1/100 dilution, Cytokeratin 1 (HA720141F, red) at 1/400 dilution and Cytokeratin 10 (HA720119F, yellow) at 1/400 dilution overnight at 4 ℃, washed with PBS.

DAPI was used as nuclear counterstain.

Background References

1. Colopy SA. et al. A population of progenitor cells in the basal and intermediate layers of the murine bladder urothelium contributes to urothelial development and regeneration. Dev Dyn 243:988-98 (2014).
2. Wang J. et al. Symmetrical and asymmetrical division analysis provides evidence for a hierarchy of prostate epithelial cell lineages. Nat Commun 5:4758 (2014).