iFluor™ 647 Conjugated Anti-Cytokeratin 14 Antibody [SC65-06]

HA720147F

Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human, Mouse, Rat
Applications:	IF-Cell, IF-Tissue
Molecular Wt:	Predicted band size: 52 kDa
Clone number:	SC65-06

Description: This gene encodes a member of the keratin family, the most diverse group of intermediate filaments. This gene product, a type I keratin, is usually found as a heterotetramer with two keratin 5 molecules, a type II keratin. Together they form the cytoskeleton of epithelial cells. Mutations in the genes for these keratins are associated with epidermolysis bullosa simplex. The nonhelical tail domain is involved in promoting KRT5-KRT14 filaments to self-organize into large bundles and enhances the mechanical properties involved in resilience of keratin intermediate filaments in vitro. Expressed in the corneal epithelium (at protein level). Detected in the basal layer, lowered within the more apically located layers specifically in the stratum spinosum, stratum granulosum but is not detected in stratum corneum. Strongly expressed in the outer root sheath of anagen follicles but not in the germinative matrix, inner root sheath or hair. A form of epidermolysis bullosa simplex, a group of skin fragility disorders characterized by skin blistering due to cleavage within the basal layer of keratinocytes, and erosions caused by minor mechanical trauma. There is a broad spectrum of clinical severity ranging from minor blistering on the feet, to subtypes with extracutaneous involvement and a lethal outcome. EBS1A is an autosomal dominant form characterized by generalized intraepidermal skin blistering that begins and is very prominent at birth. EBS1A may be life-threatening in the first year of life. Tendency to blistering diminishes in adolescence.

Conjugate:	iFluor™ 647, Ex: 656nm; Em: 670nm.
Immunogen:	Recombinant protein within Human Cytokeratin 14 aa 250-484.
Positive control:	A431, rat skin tissue.
Subcellular location:	Cytoplasm, Nucleus.
Database links:	SwissProt: P02533 Human | Q6IFV1 Rat
Recommended Dilutions:	
IF-Cell	1:100
IF-Tissue	1:400
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

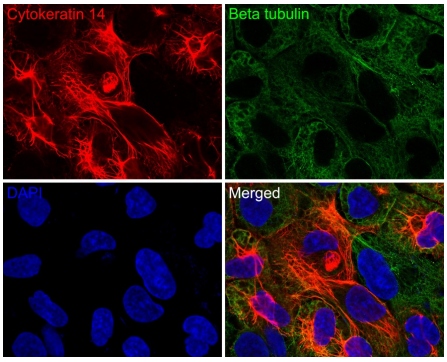

Fig1: Immunocytochemistry analysis of A431 cells labeling Cytokeratin 14 with Rabbit anti-Cytokeratin 14 antibody (HA720147F) at 1/100 dilution.

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 2% normal goat serum for 1 hour at 37℃. Cells were then incubated with Rabbit anti-Cytokeratin 14 antibody (HA720147F, red) at 1/100 dilution in 2% normal goat serum overnight at 4 ℃. Nuclear DNA was labelled in blue with DAPI.

Beta tubulin (M1305-2, green) was stained at 1/200 dilution overnight at +4℃. Goat Anti-Mouse IgG H&L (iFluor™ 488, HA1125) was used as the secondary antibody at 1/800 dilution.

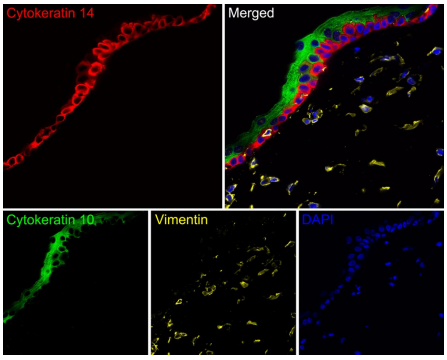

Fig2: Immunofluorescence analysis of paraffin-embedded rat skin tissue labeling Cytokeratin 14 (HA720147F), Cytokeratin 10 (HA720134F) and Vimentin (EM0401).

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 14 (HA720147F, red) at 1/400 dilution, Cytokeratin 10 (HA720134F, green) at 1/400 dilution and Vimentin (EM0401, yellow) at 1/1,000 dilution overnight at 4 ℃, washed with PBS.

Alexa Fluor® 555 conjugate-Goat anti-Mouse IgG (HA1125) was used as the secondary antibody at 1/1,000 dilution. DAPI was used as nuclear counterstain.

Background References

1. Pastar I. et al. Interactions of methicillin resistant Staphylococcus aureus USA300 and Pseudomonas aeruginosa in polymicrobial wound infection. PLoS One 8:e56846 (2013).
2. DeWard AD. et al. Cellular heterogeneity in the mouse esophagus implicates the presence of a nonquiescent epithelial stem cell population. Cell Rep 9:701-11 (2014).