abcam

ab77684

FITC Anti-Cytokeratin 14 antibody [LL002]

Anti-Cytokeratin 14 antibody [LL002] conjugated to FITC - suitable for flow cytometry, IHC-P, and reacts with human samples. Clone [LL002] is a mouse monoclonal antibody cited in 12 publications.

Key facts

Isotype	IgG3
Host species	Mouse
Conjugation	FITC
Excitation/Emission	Ex: 495nm, Em: 519nm
Storage buffer	Preservative: 0.065% Sodium azide Constituents: PBS, 0.1% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	Synthetic Peptide within Human Keratin, type I cytoskeletal 14 aa 450 to C-terminus conjugated to Bovine Thyroglobulin. The exact immunogen used to generate this antibody is proprietary information. Database link P02533
Clone number	LL002
Purification technique	Ion exchange chromatography
Purification notes	Ammonium sulphate precipitation followed by ion exchange chromatography.

Reactivity data

Flow Cyt

Tested

Species	Human

Dilution info	10 µL for 10^6 Cells
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

IHC-P

Tested

Species	Human
Dilution info	-
Notes	Perform heat-mediated antigen retrieval via the microwave method before commencing with IHC staining protocol.

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

Target data

See full target information Keratin, type I cytoskeletal 14

Function	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.

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C

Appropriate long-term storage conditions	+4°C

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	Cytokeratin 14 also known as CK14 keratin 14 or KRT14 is a type I keratin protein with a molecular mass of approximately 50 kDa. It forms intermediate filaments in epithelial cells primarily in the basal layer of stratified epithelium and is part of the cytoskeleton. Cytokeratin 14 expression appears in tissues such as the epidermis tongue and esophagus where it contributes to the structural integrity and mechanical stability of cells. Laboratories often utilize antibodies like anti-K14 and labels such as Alexa Fluor 555 or Alexa Fluor 647 to identify cytokeratin 14 in research settings.
Biological function summary	This protein significantly contributes to the maintenance and regeneration of epithelial tissues by forming a network of filaments with keratin 5. KRT14 pairs with keratin 5 to create a keratin intermediate filament complex which plays a structural role in the resilience and elasticity of epithelial tissues. This partnership is essential for the assembly of the cytoskeleton and supports the protective barrier function of the skin and related tissues.
Pathways	Cytokeratin 14 engages in pivotal cellular processes like keratinization and wound healing. The protein is actively involved in signal transduction pathways such as the epithelial cell differentiation pathway. Within these pathways KRT14 collaborates with KRT5 and other structural proteins to regulate cell proliferation and differentiation reflecting its importance in skin health and function.
Associated diseases and disorders	Cytokeratin 14 associates with specific genetic conditions including epidermolysis bullosa simplex (EBS) and squamous cell carcinoma (SCC). In EBS mutations in the KRT14 gene lead to skin fragility. In SCC altered expression of KRT14 and related proteins such as keratin 5 can influence tumor progression and invasion. These associations highlight the critical role of KRT14 in both normal and pathological epithelial function.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

We do not recommend this combination. It is not covered by our product promise.

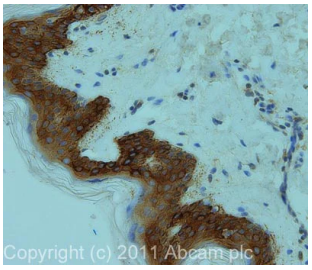
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

---

2 product images

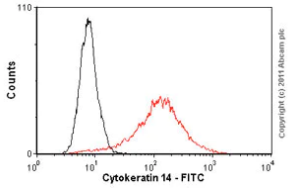


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - FITC Anti-Cytokeratin 14 antibody [LL002] (ab77684)

Cytokeratin 14 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using mouse Anti-Cytokeratin 14 antibody

IHC image of ab77684 staining in human skin formalin fixed paraffin embedded tissue section, performed on a Leica Bond^{TM} system using the standard protocol F. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH6, epitope retrieval solution 1) for 20 mins. The section was then incubated with ab77684, neat, for 15 mins at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.

For other IHC staining systems (automated and non-automated) customers should optimize variable parameters such as antigen retrieval conditions, primary antibody concentration and antibody incubation times.



Flow Cytometry - FITC Anti-Cytokeratin 14 antibody [LL002] (ab77684)

Cytokeratin 14 Flow Cytometry staining using mouse Anti-Cytokeratin 14 antibody

Overlay histogram showing A431 cells stained with ab77684 (red line). The cells were fixed with 4% paraformaldehyde (10 min)) and then permeabilized with 0.1% PBS-Triton for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab77684, 1µg/1x10^6 cells) for 30 min at 22°C. Isotype control antibody (black line) was mouse IgG3 FITC (1µg/1x10^6 cells) used under the same conditions. Acquisition of >5,000 events was performed. This antibody gave a positive signal in A431 cells fixed with 80% methanol/permeabilized in 0.1% PBS-Triton used under the same conditions.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.