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Product datasheet

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

5 References 2 Images

Overview

Product name	Anti-Cytokeratin 14 antibody [LL002] (FITC)
Description	Mouse monoclonal [LL002] to Cytokeratin 14 (FITC)
Conjugation	FITC. Ex: 493nm, Em: 528nm
Tested applications	**Suitable for:** IHC-P, IHC-Fr, Flow Cyt
Species reactivity	**Reacts with:** Rabbit, Human **Predicted to work with:** Mouse, Rat
Immunogen	Synthetic peptide: GKVVSTHEQVLRTKN conjugated to Thyroglobulin, corresponding to C terminal amino acids 458-472 of Human Cytokeratin 14 Run BLAST with ExPASy Run BLAST with NCBI

Properties

Form	Liquid
Storage instructions	Store at +4°C.
Storage buffer	Preservative: 10mM Sodium Azide Constituents: PBS, 1mg/ml BSA
Purity	Ion Exchange Chromatography
Purification notes	Ammonium sulphate precipitation followed by ion exchange chromatography.
Clonality	Monoclonal
Clone number	LL002
Myeloma	NS1
Isotype	IgG3

Applications

Our Abpromise guarantee covers the use of **ab77684** in the following tested applications.

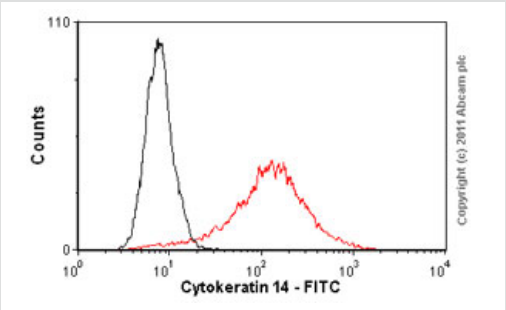
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
IHC-P		Use at an assay dependent dilution. Perform heat mediated antigen retrieval via the microwave method before commencing with IHC staining protocol.
IHC-Fr		Use at an assay dependent dilution.
Flow Cyt		Use 10µl for 10^6 cells.

Target

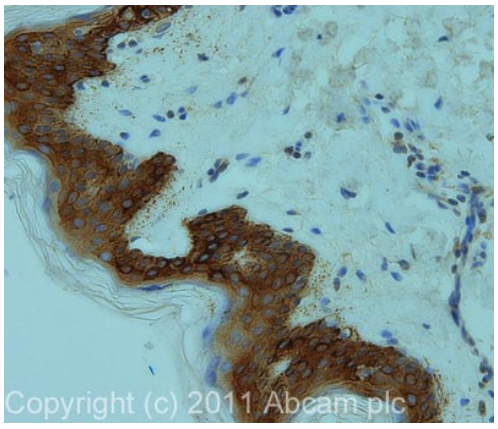
Function	The nonhelical tail domain is involved in promoting KRT5-KRT14 filaments to self-organize into large bundles and enhances the mechanical properties involved in resilience of keratin intermediate filaments in vitro.
Tissue specificity	Detected in the basal layer, lowered within the more apically 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. Found in keratinocytes surrounding the club hair during telogen.
Involvement in disease	Defects in KRT14 are a cause of epidermolysis bullosa simplex Dowling-Meara type (DM-EBS) [MIM:131760]. DM-EBS is a severe form of intraepidermal epidermolysis bullosa characterized by generalized herpetiform blistering, milia formation, dystrophic nails, and mucous membrane involvement. Defects in KRT14 are a cause of epidermolysis bullosa simplex Weber-Cockayne type (WC-EBS) [MIM:131800]. WC-EBS is a form of intraepidermal epidermolysis bullosa characterized by blistering limited to palmar and plantar areas of the skin. Defects in KRT14 are a cause of epidermolysis bullosa simplex Koebner type (K-EBS) [MIM:131900]. K-EBS is a form of intraepidermal epidermolysis bullosa characterized by generalized skin blistering. The phenotype is not fundamentally distinct from the Dowling-Meara type, although it is less severe. Defects in KRT14 are the cause of epidermolysis bullosa simplex autosomal recessive (AREBS) [MIM:601001]. AREBS is an intraepidermal epidermolysis bullosa characterized by localized blistering on the dorsal, lateral and plantar surfaces of the feet. Defects in KRT14 are the cause of Naegeli-Franceschetti-Jadassohn syndrome (NFJS) [MIM:161000]; also known as Naegeli syndrome. NFJS is a rare autosomal dominant form of ectodermal dysplasia. The cardinal features are absence of dermatoglyphics (fingerprints), reticular cutaneous hyperpigmentation (starting at about the age of 2 years without a preceding inflammatory stage), palmoplantar keratoderma, hypohidrosis with diminished sweat gland function and discomfort provoked by heat, nail dystrophy, and tooth enamel defects. Defects in KRT14 are the cause of dermatopathia pigmentosa reticularis (DPR) [MIM:125595]. DPR is a rare ectodermal dysplasia characterized by lifelong persistent reticulate hyperpigmentation, noncicatricial alopecia, and nail dystrophy.
Sequence similarities	Belongs to the intermediate filament family.
Cellular localization	Cytoplasm. Nucleus. Expressed in both as a filamentous pattern.

Images



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

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 22ºC. 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.



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

IHC image of ab77684 staining in human skin formalin fixed paraffin embedded tissue section, performed on a Leica Bond™ 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.

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