

## Product datasheet

# Alexa Fluor® 555 Anti-Cytokeratin 14 antibody [EP1612Y] $\alpha$ b214391

Recombinant RabMAb

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### Overview

|                            |   |
|----------------------------|---|
| <b>Product name</b>        | Alexa Fluor® 555 Anti-Cytokeratin 14 antibody [EP1612Y]   |
| <b>Description</b>         | Alexa Fluor® 555 Rabbit monoclonal [EP1612Y] to Cytokeratin 14  |
| <b>Host species</b>        | Rabbit  |
| <b>Conjugation</b>         | Alexa Fluor® 555. Ex: 555nm, Em: 565nm  |
| <b>Tested applications</b> | <b>Suitable for:</b> IHC-P, ICC/IF  |
| <b>Species reactivity</b>  | <b>Reacts with:</b> Human   |
| <b>Immunogen</b>           | Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.   |
| <b>Positive control</b>    | ICC/IF: A431 cells IHC-P: Human normal skin tissue.   |
| <b>General notes</b>       | <p>This product is a recombinant monoclonal antibody, which offers several advantages including:</p> <ul style="list-style-type: none"> <li>- High batch-to-batch consistency and reproducibility</li> <li>- Improved sensitivity and specificity</li> <li>- Long-term security of supply</li> <li>- Animal-free production</li> </ul> <p>For more information <a href="#">see here</a>.</p> <p>Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to <a href="#">RabMAb® patents</a>.</p> <p>Alexa Fluor® is a registered trademark of Molecular Probes, Inc, a Thermo Fisher Scientific Company. The Alexa Fluor® dye included in this product is provided under an intellectual property license from Life Technologies Corporation. As this product contains the Alexa Fluor® dye, the purchase of this product conveys to the buyer the non-transferable right to use the purchased product and components of the product only in research conducted by the buyer (whether the buyer is an academic or for-profit entity). As this product contains the Alexa Fluor® dye the sale of this product is expressly conditioned on the buyer not using the product or its components, or any materials made using the product or its components, in any activity to generate revenue, which may include, but is not limited to use of the product or its components: (i) in manufacturing; (ii) to provide a service, information, or data in return for payment (iii) for therapeutic, diagnostic or prophylactic purposes; or (iv) for resale, regardless of whether they are sold for use in research. For information on purchasing a license to this product for purposes other than research, contact Life Technologies Corporation, 5781 Van Allen Way, Carlsbad, CA 92008 USA or <a href="mailto:outlicensing@thermofisher.com">outlicensing@thermofisher.com</a>.</p> |

## Properties

|                             |  |
|-----------------------------|--|
| <b>Form</b>                 | Liquid   |
| <b>Storage instructions</b> | Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C. Avoid freeze / thaw cycle. Store In the Dark. |
| <b>Storage buffer</b>       | pH: 7.40<br>Preservative: 0.02% Sodium azide<br>Constituents: 30% Glycerol (glycerin, glycerine), 1% BSA, PBS                              |
| <b>Purity</b>               | Protein A purified   |
| <b>Clonality</b>            | Monoclonal   |
| <b>Clone number</b>         | EP1612Y  |
| <b>Isotype</b>              | IgG  |

## Applications

**The Abpromise guarantee** Our **Abpromise guarantee** covers the use of ab214391 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       | ★☆☆☆☆ (1) | 1/100. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol. |
| ICC/IF      |           | 1/100.<br>This product gave a positive signal in A431 cells fixed with 4% formaldehyde (10 min) and 100% methanol (5 min) |

## Target

|                               |   |
|-------------------------------|---|
| <b>Function</b>               | 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.  |
| <b>Tissue specificity</b>     | 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.  |
| <b>Involvement in disease</b> | 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.<br>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.<br>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.

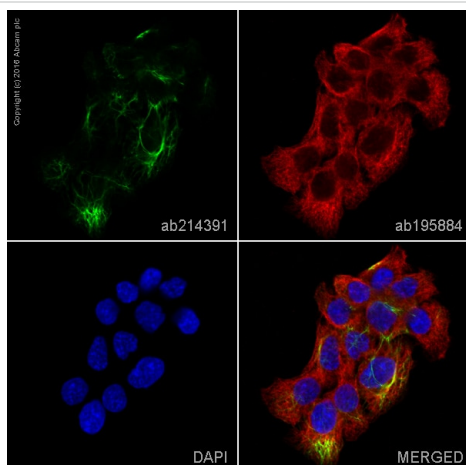
#### Sequence similarities

Belongs to the intermediate filament family.

#### Cellular localization

Cytoplasm. Nucleus. Expressed in both as a filamentous pattern.

### Images

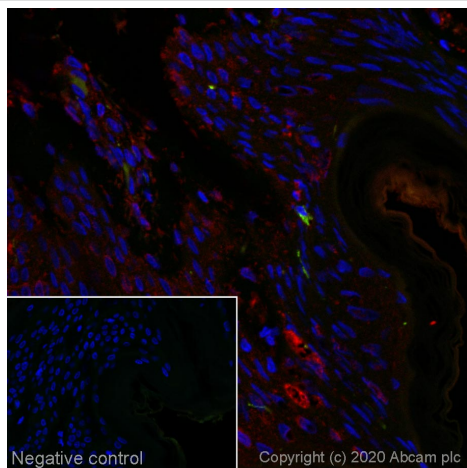


Immunocytochemistry/ Immunofluorescence - Alexa Fluor® 555 Anti-Cytokeratin 14 antibody [EP1612Y] (ab214391)

ab214391 staining Cytokeratin 14 in A431 cells. The cells were fixed with 100% methanol (5 min), permeabilized with 0.1% Triton X-100 for 5 minutes and then blocked with 1% BSA/10% normal goat serum/0.3M glycine in 0.1% PBS-Tween for 1h. The cells were then incubated overnight at +4°C with ab214391 at 1/100 dilution (**pseudocolored in green**) and **ab195884**, Rat monoclonal to Tubulin (Alexa Fluor® 647), at 1/250 dilution (shown in red). Nuclear DNA was labelled with DAPI (shown in blue).

Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).

This product also gave a positive signal under the same testing conditions in A431 cells fixed with 4% formaldehyde (10 min).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Alexa Fluor® 555 Anti-CytoKeratin 14 antibody [EP1612Y] (ab214391)

Immunofluorescence staining of CytoKeratin 14 staining in a section of formalin-fixed paraffin-embedded human normal skin\*.

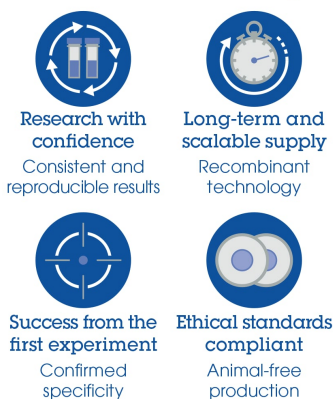
Performed on a Leica BOND. The section was pre-treated using heat mediated antigen retrieval with EDTA (pH 9.0) using retrieval settings of 110°C for 20 minutes. The section was then incubated at room temperature for 1 hour with ab214391 at 1/100 dilution (shown in green) and counterstained using **ab195884**, Rat monoclonal to Tubulin (Alexa Fluor® 647), at 1/250 dilution (shown in green). Nuclear DNA was labelled with DAPI (shown in blue). The section was then mounted using Dako Fluorescence Mounting Medium®.

Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).

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

\*Tissue obtained from the Human Research Tissue Bank, supported by the NIHR Cambridge Biomedical Research Centre.

#### Why choose a recombinant antibody?



Alexa Fluor® 555 Anti-CytoKeratin 14 antibody [EP1612Y] (ab214391)

**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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