Product datasheet

Anti-Cytokeratin 14 antibody [EP1612Y] ab51054

Overview

- **Product name**: Anti-Cytokeratin 14 antibody [EP1612Y]
- **Description**: Rabbit monoclonal [EP1612Y] to Cytokeratin 14
- **Host species**: Rabbit
- **Tested applications**: Suitable for: WB, IP, Flow Cyt, IHC-P, ICC/IF
- **Species reactivity**: Reacts with: Human
- **Immunogen**: Synthetic peptide within Human Cytokeratin 14 aa 400-500 (C terminal). The exact sequence is proprietary.
- **Positive control**: A431 cell lysate or human squamous lung carcinoma tissue. IF/ICC: A431 cell line.
- **General notes**: A trial size is available to purchase for this antibody.
  - Mouse, Rat: We have preliminary internal testing data to indicate this antibody may not react with these species. Please contact us for more information.
  - Our RabMab® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMab® patents
  - This product is a recombinant rabbit monoclonal antibody.

Properties

- **Form**: Liquid
- **Storage instructions**: Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles.
- **Storage buffer**: PBS 49%, Sodium azide 0.01%, Glycerol 50%, BSA 0.05%
- **Purity**: Tissue culture supernatant
- **Clonality**: Monoclonal
- **Clone number**: EP1612Y
- **Isotype**: IgG

Applications

Our Abpromise guarantee covers the use of ab51054 in the following tested applications.
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.

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.

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.

Belongs to the intermediate filament family.

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

### Application

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<tr>
<th>Application</th>
<th>Abreviews</th>
<th>Notes</th>
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<tr>
<td>WB</td>
<td>1/20000. Detects a band of approximately 48 kDa (predicted molecular weight: 52 kDa).</td>
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<tr>
<td>IP</td>
<td>1/50.</td>
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<td>Flow Cyt</td>
<td>1/100. - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.</td>
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<td>IHC-P</td>
<td>Use at an assay dependent concentration.</td>
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<tr>
<td>ICC/IF</td>
<td>1/100.</td>
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Immunocytochemistry/ Immunofluorescence - Anti-Cytokeratin 14 antibody [EP1612Y] (ab51054)

ICC/IF image of ab5104 stained A431 cells. The cells were 100% methanol fixed (5 min) and then incubated in 1%BSA / 10% normal goat serum / 0.3M glycine in 0.1% PBS-Tween for 1h to permeabilise the cells and block non-specific protein-protein interactions. The cells were then incubated with the antibody (ab51504, 1/100 dilution) overnight at +4°C. The secondary antibody (green) was ab96899, DyLight® 488 goat anti-rabbit IgG (H+L) used at a 1/250 dilution for 1h. Alexa Fluor® 594 WGA was used to label plasma membranes (red) at a 1/200 dilution for 1h. DAPI was used to stain the cell nuclei (blue) at a concentration of 1.43µM.

Western blot - Anti-Cytokeratin 14 antibody [EP1612Y] (ab51054) at 1/20000 dilution + A431 cell lysate at 10 µg

Secondary
Goat anti-Rabbit HRP labeled at 1/2000 dilution

Predicted band size: 52 kDa
Observed band size: 48 kDa
Overlay histogram showing A431 cells stained with ab51054 (red line). The cells were fixed with 80% methanol (5 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 (ab51054, 1/100 dilution) for 30 min at 22°C. The secondary antibody used was DyLight® 488 goat anti-rabbit IgG (H+L) (ab96899) at 1/500 dilution for 30 min at 22°C. Isotype control antibody (black line) was rabbit IgG (monoclonal) (1µg/1x10⁶ cells) used under the same conditions. Acquisition of >5,000 events was performed. This antibody gave a positive signal in A431 cells fixed with 4% paraformaldehyde/permeabilized in 0.1% PBS-Triton used under the same conditions.

ab51054 staining Cytokeratin 14 in human skin tissue by Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections).

Tissue was fixed in paraformaldehyde and a heat mediated antigen retrieval step was performed using citrate buffer, pH 6.0. Samples were then permeabilized using 0.1% saponin/PBS, blocked with 4% BSA for 30 minutes at 25°C and then incubated with ab51054 at a 1/200 dilution for 16 hours at 4°C. The secondary used was a Texas Red conjugated goat anti-rabbit polyclonal used at a 1/100 dilution.

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