

Product datasheet

Anti-Cytokeratin 14 antibody [EPR17336] ab197893

KO VALIDATED

Recombinant

RabMAb[®]

6 Images

Overview

Product name	Anti-Cytokeratin 14 antibody [EPR17336]
Description	Rabbit monoclonal [EPR17336] to Cytokeratin 14
Host species	Rabbit
Tested applications	Suitable for: IHC-P, WB
Species reactivity	Reacts with: Mouse, Rat, Human
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
Positive control	WB: A431 cell lysate, mouse and rat skin lysates and human skin tissue lysates. IHC-P: Human squamous cell carcinoma of cervix and mouse skin tissues. ICC/IF: HaCaT and A431 cells.
General notes	<p>This product is a recombinant monoclonal antibody, which offers several advantages including:</p> <ul style="list-style-type: none"> - High batch-to-batch consistency and reproducibility - Improved sensitivity and specificity - Long-term security of supply - Animal-free production <p>For more information see here.</p> <p>Our RabMAb[®] technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb[®] patents.</p>

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.
Storage buffer	<p>pH: 7.20</p> <p>Preservative: 0.01% Sodium azide</p> <p>Constituents: 50% Glycerol (glycerin, glycerine), 0.05% BSA, 49% PBS</p>
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR17336
Isotype	IgG

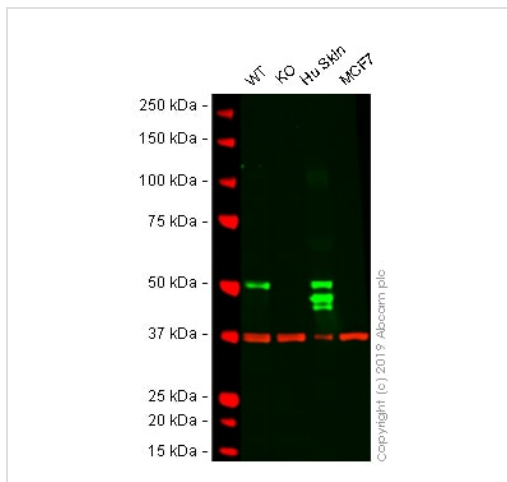
Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab197893 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		1/500. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.
WB		1/50000. Predicted molecular weight: 66 kDa.

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	<p>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.</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>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.</p>
Sequence similarities	Belongs to the intermediate filament family.
Cellular localization	Cytoplasm. Nucleus. Expressed in both as a filamentous pattern.



Western blot - Anti-Cytokeratin 14 antibody [EPR17336] (ab197893)

All lanes : Anti-Cytokeratin 14 antibody [EPR17336] (ab197893) at 1/50000 dilution

Lane 1 : Wild-type A-431 (Human epidermoid carcinoma cell line) whole cell lysate

Lane 2 : KRT14 knockout A-431 (Human epidermoid carcinoma cell line) whole cell lysate

Lane 3 : Human skin whole tissue lysate

Lane 4 : MCF7 (Human breast adenocarcinoma cell line) whole cell lysate

Lysates/proteins at 20 µg per lane.

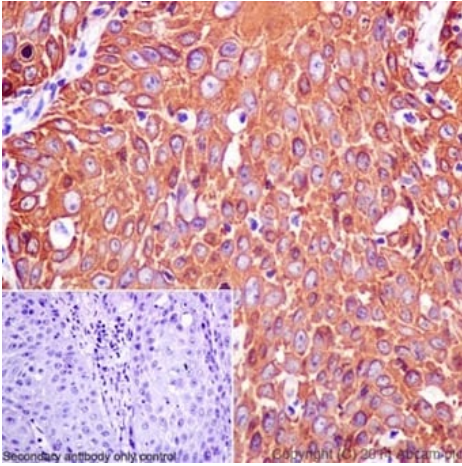
Performed under reducing conditions.

Predicted band size: 66 kDa

Observed band size: 52 kDa

Lanes 1 - 4: Merged signal (red and green). Green - ab197893 observed at 52 kDa. Red - loading control, **ab8245** (Mouse anti-GAPDH antibody [6C5]) observed at 37kDa.

ab197893 was shown to react with KRT14 in A431 wild-type cells in Western blot. Loss of signal was observed when KRT14 knockout sample was used. A431 wild-type and KRT14 knockout cell lysates were subjected to SDS-PAGE. Membranes were blocked in 3% Milk in TBS-T (0.1% Tween®) before incubation with ab197893 and **ab8245** (Mouse anti-GAPDH antibody [6C5]) overnight at 4°C at a 1 in 50000 dilution and a 1 in 20000 dilution respectively. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preabsorbed (**ab216773**) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preabsorbed (**ab216776**) secondary antibodies at 1 in 20000 dilution for 1 hour at room temperature before imaging.



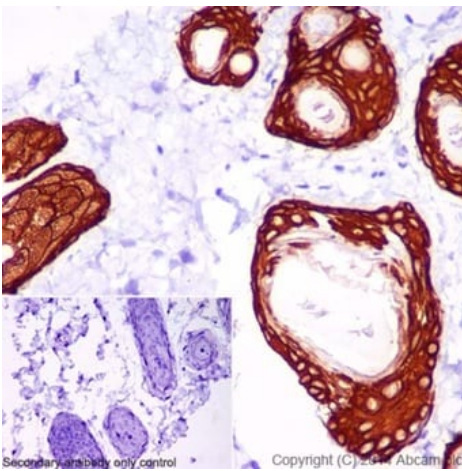
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Cytokeratin 14 antibody [EPR17336] (ab197893)

Immunohistochemical analysis of paraffin-embedded Human squamous cell carcinoma of cervix tissue labeling Cytokeratin 14 using ab197893 at 1/500 dilution. A Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) was used as secondary at 1/500 dilution. Counterstain: Hematoxylin.

Inset image: negative control obtained using PBS instead of ab197893 and secondary antibody only.

Note: Cytoplasm staining on human squamous cell carcinoma of cervix tissue was observed.

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



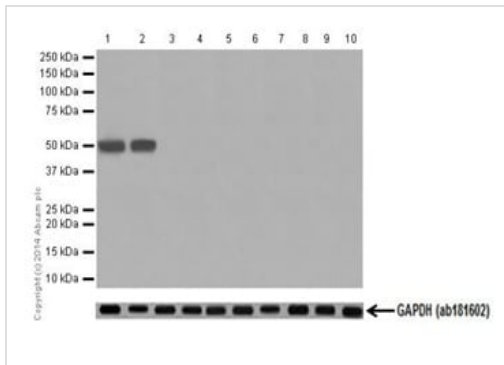
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Cytokeratin 14 antibody [EPR17336] (ab197893)

Immunohistochemical analysis of paraffin-embedded Mouse skin tissue labeling Cytokeratin 14 using ab197893 at 1/500 dilution. A Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) was used as secondary at 1/500 dilution. Counterstain: Hematoxylin.

Inset image: negative control obtained using PBS instead of ab197893 and secondary antibody only.

Note: Cytoplasm staining on mouse skin tissue was observed.

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Western blot - Anti-Cytokeratin 14 antibody [EPR17336] (ab197893)

All lanes : Anti-Cytokeratin 14 antibody [EPR17336] (ab197893) at 1/50000 dilution

Lane 1 : Mouse skin lysate at 20 µg

Lane 2 : Rat skin lysate at 20 µg

Lane 3 : Rat brain lysate at 10 µg

Lane 4 : Rat heart lysate at 10 µg

Lane 5 : Rat kidney lysate at 10 µg

Lane 6 : Rat spleen lysate at 10 µg

Lane 7 : C6(Rat glial tumor cells) whole cell lysate at 10 µg

Lane 8 : Raw264.7(Mouse macrophage cells transformed with Abelson murine leukemia virus) whole cell lysate at 10 µg

Lane 9 : PC-12(Rat adrenal gland pheochromocytoma) whole cell lysate at 10 µg

Lane 10 : NIH/3T3 (Mouse embryo fibroblast cells) whole cell lysate at 10 µg

Secondary

All lanes : Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/1000 dilution

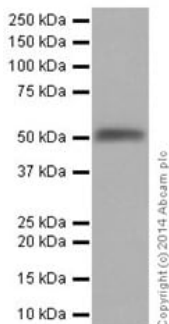
Predicted band size: 66 kDa

Observed band size: 53 kDa

Exposure time: 30 seconds

5% NFDm/TBST: Blocking and diluting buffer.

The expression of Cytokeratin 14 is basal cells of epidermis and other stratified epithelia. Lanes 3-10 represent Cytokeratin 14 negative tissues and cell lines.



Western blot - Anti-Cytokeratin 14 antibody [EPR17336] (ab197893)

Anti-Cytokeratin 14 antibody [EPR17336] (ab197893) at 1/50000 dilution + human fetal skin lysate at 10 µg

Secondary

Anti-Rabbit IgG (HRP), specific to the non-reduced form of IgG at 1/1000 dilution





Predicted band size: 66 kDa

Observed band size: 53 kDa

Exposure time: 30 seconds

5% NFDm/TBST: Blocking and diluting buffer.

Why choose a recombinant antibody?

 Research with confidence Consistent and reproducible results	 Long-term and scalable supply Recombinant technology
 Success from the first experiment Confirmed specificity	 Ethical standards compliant Animal-free production

Anti-Cytokeratin 14 antibody [EPR17336] (ab197893)

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

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