abcam

ab181980

Anti-Involucrin antibody [EPR13054]

Recombinant | RabMAb | 20ul selling size

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR13054
Purity	Tissue culture supernatant
Specificity	Unsuitable for rat IHC-P.

Reactivity data

WB

Tested

Species	Rat
Dilution info	1/10000 - 1/50000
Notes	-

Species	Human

Dilution info	1/10000 - 1/50000
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/10
Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Expected

Species	Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

IHC-P

Tested

Species	Human
Dilution info	1/100
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Not recommended

Species	Rat
Dilution info	-
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Target data

See full target information IVL

Function	Part of the insoluble cornified cell envelope (CE) of stratified squamous epithelia.

Storage

Shipped at conditions	Conditional Ambient
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Notes

Patented technology
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?
This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

Supplementary info

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

Activity summary	Involucrin also known as involucrine envocrin or ivrn is a protein with a mass of approximately 68 kDa. You will find involucrin expressed mainly in the suprabasal layers of the stratified squamous epithelia including epidermis tongue and esophagus. This protein becomes cross-linked to form the cornified cell envelope (CCE) in the upper layers of the skin an essential structure for epidermal differentiation and maintenance of skin barrier function.

Biological function summary	Involucrin serves as a critical substrate in the formation of the CCE by providing reactive sites for cross-linking with other proteins like loricrin and small proline-rich proteins. This cross-linking process occurs due to the action of transglutaminases which bond glutamine residues of involucrin with lysine residues in other proteins reinforcing the skin's protective barrier. Involucrin is a part of the protein network integral to keratinocyte terminal differentiation playing a distinctive role in the formation of a resilient and impermeable skin surface.
Pathways	Involucrin contributes directly within the epidermal differentiation complex (EDC) supporting the skin barrier's structural stability and resilience. The protein prominently acts in the terminal differentiation pathway in conjunction with other structural proteins such as filaggrin and keratins. This pathway forms a protective barrier that resists mechanical stress and environmental insults functioning together to provide a robust defense against external factors.
Associated diseases and disorders	Involucrin's role is highlighted in conditions like psoriasis and ichthyosis where skin barrier formation is disrupted. Aberrant expression or modification of involucrin can lead to compromised barrier integrity leading to these skin disorders. It relates closely to filaggrin in these conditions as both are essential for barrier function and mutations in these proteins can exacerbate skin pathologies. Understanding these connections helps us evaluate potential therapeutic strategies for skin barrier-related diseases.

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

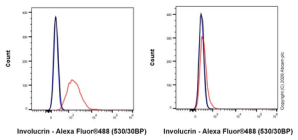
We do not recommend this combination. It is not covered by our product promise.

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.

5 product images

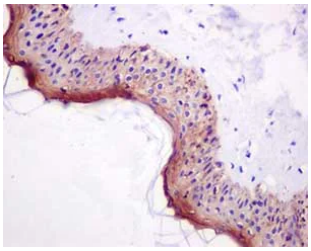


Flow Cytometry - Anti-Involucrin antibody [EPR13054] (ab181980)

Involucrin Flow Cytometry staining using rabbit Anti-Involucrin antibody

Flow cytometry overlay histogram of 4% Paraformaldehyde fixed 90% methanol permeabilized HaCaT (human skin keratinocyte) (Left) HeLa (human cervix adenocarcinoma epithelial cell) (Right) cells labelling Involucrin with ab181980 at 1/1000 dilution (red) compared with a Rabbit monoclonal IgG (ab172730) (Black) isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue). Goat Anti-Rabbit IgG (Alexa Fluor® 488, ab150081), at 1/2000 dilution was used as the secondary antibody.

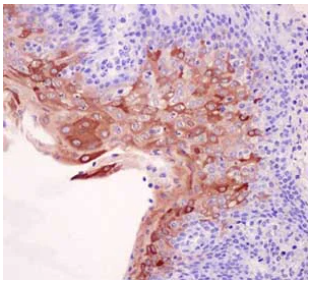
Negative sample: HeLa.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Involucrin antibody [EPR13054] (ab181980)

Involucrin Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Involucrin antibody

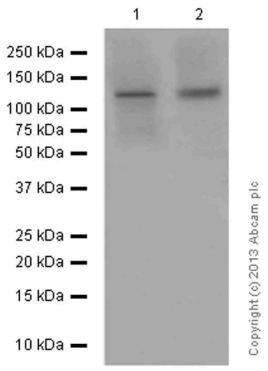
Immunohistochemical analysis of paraffin-embedded Human skin tissue labeling Involucrin with ab181980 at 1/100 dilution, followed by prediluted ImmunoHistoprobe (Ready to use) HRP Polymer for Rabbit IgG. Counter stained with Hematoxylin.
Perform heat mediated antigen retrieval with EDTA buffer pH 9 before commencing with IHC staining protocol.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Involucrin antibody [EPR13054] (ab181980)

Involucrin Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Involucrin antibody

Immunohistochemical analysis of paraffin-embedded Human tonsil tissue labeling Involucrin with ab181980 at 1/100 dilution, followed by prediluted ImmunoHistoprobe (Ready to use) HRP Polymer for Rabbit IgG. Counter stained with Hematoxylin.
Perform heat mediated antigen retrieval with EDTA buffer pH 9 before commencing with IHC staining protocol.



Western blot - Anti-Involucrin antibody [EPR13054] (ab181980)

Involucrin Western blot staining using rabbit Anti-Involucrin antibody

Diluting and blocking buffer: 5% NFDM/TBST
All lanes:
Western blot - Anti-Involucrin antibody [EPR13054] (ab181980) at 1/500000 dilution

Lane 1:
HaCaT (Human keratinocyte cell line) whole cell lysate at 10 µg

Lane 2:
A431 (Human epidermoid carcinoma cell line) whole cell lysate at 10 µg

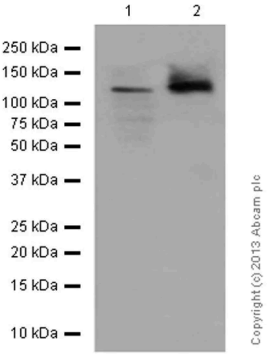
Secondary

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

Predicted band size: 68 kDa

Observed band size: 120 kDa

Exposure time: 1min



Western blot - Anti-Involucrin antibody [EPR13054] (ab181980)

Diluting and blocking buffer: 5% NFDM/TBST
All lanes:
Western blot - Anti-Involucrin antibody [EPR13054] (ab181980) at 1/50000 dilution

Lane 1:
Human fetal skin tissue at 10 µg

Lane 2:
Rat skin tissue at 10 µg

Secondary

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

Predicted band size: 68 kDa

Observed band size: 120 kDa

Exposure time: 1min

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