abcam

ab240256

# Anti-Involucrin antibody [EPR13054] - BSA and Azide free

Recombinant | RabMAb

## Key facts

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|---|---|
| **Isotype** | IgG |
| **Host species** | Rabbit |
| **Storage buffer** | pH: 7.2 - 7.4 Constituents: PBS |
| **Form** | Liquid |
| **Clonality** | Monoclonal |
| **Immunogen** | The exact immunogen used to generate this antibody is proprietary information. |
| **Carrier free** | Yes |
| **Clone number** | EPR13054 |
| **Purification technique** | Affinity purification Protein A |
| **Specificity** | Unsuitable for rat IHC-P. |
| **Concentration** | 1.027 mg/mL The concentration of this product may be batch-dependent<br>Batch concentration finder → |

## Reactivity data

## WB

### Expected

| | |
|---|---|
| **Species** | Rat, Human |

| | |
|---|---|
| **Dilution info** | Use at an assay dependent concentration. |
| **Notes** | - |

## Flow Cyt (Intra)

### Tested

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | - |
| **Notes** | ab199376 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody. |

### Predicted

| | |
|---|---|
| **Species** | Rat |
| **Dilution info** | - |
| **Notes** | - |

## IHC-P

### Tested

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | - |
| **Notes** | - |

### Not recommended

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|---|---|
| **Species** | Rat |
| **Dilution info** | - |
| **Notes** | - |

# Target data

See full target information IVL

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

## Storage

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| **Shipped at conditions** | Blue Ice |
| **Appropriate short-term storage conditions** | +4°C |
| **Appropriate long-term storage conditions** | +4°C |
| **Storage information** | Do Not Freeze |

## Notes

ab240256 is the carrier-free version of ab181980.

**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.

**Conjugation ready**
Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.

Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with 1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.

**Compatibility**
This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc.

## Supplementary info

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

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|---|---|
| **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**

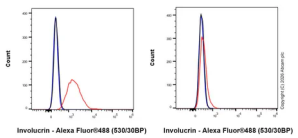
We do not recommend this combination. It is not covered by our product promise.

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.

## 3 product images



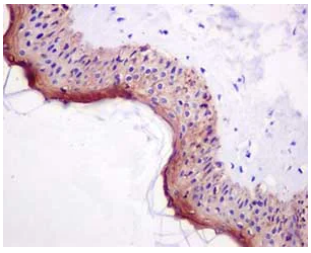
### Flow Cytometry - Anti-Involucrin antibody [EPR13054] - BSA and Azide free (ab240256)

Involucrin Flow Cytometry staining using rabbit Anti-Involucrin antibody

This data was developed using ab181980, the same antibody clone in a different buffer formulation.

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.

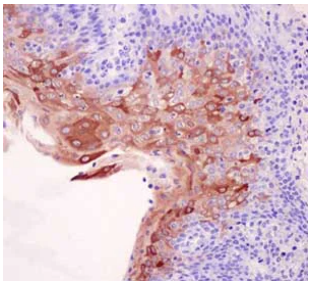


### Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Involucrin antibody [EPR13054] - BSA and Azide free (ab240256)

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.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab181980).

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] - BSA and Azide free (ab240256)

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.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab181980).

| | |
|---|---|
| | Perform heat mediated antigen retrieval with EDTA buffer pH 9 before commencing with IHC staining protocol. |

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