abcam

Product datasheet

Anti-Cytokeratin 13 antibody [AE8] - BSA and Azide free ab269574

KO VALIDATED

5 Images

Overview

Product name	Anti-Cytokeratin 13 antibody [AE8] - BSA and Azide free
Description	Mouse monoclonal [AE8] to Cytokeratin 13 - BSA and Azide free
Host species	Mouse
Tested applications	**Suitable for:** WB, IHC-P, ICC/IF, IHC-Fr
Species reactivity	**Reacts with:** Human **Predicted to work with:** Mouse, Rabbit
Immunogen	Tissue, cells or virus. This information is proprietary to Abcam and/or its suppliers.
Positive control	WB: A431 whole cell lysate. ICC/IF: A431 cells. IHC-P: Human tonsil. IHC-Fr: Human tonsil.
General notes	This antibody is specific for Cytokeratin 13, which is a marker for oesophageal type differentiation which is expressed by various internal stratified epithelia. ab269574 is the carrier-free version of **ab16112**. This antibody clone is manufactured by Abcam. If you require a custom buffer formulation or conjugation for your experiments, please contact **orders@abcam.com**. Our **carrier-free** antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. The carrier-free buffer and high concentration allow for increased conjugation efficiency. 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. 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. The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets

your needs before purchasing.

If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C. Do Not Freeze.
Storage buffer	Constituent: PBS
Carrier free	Yes
Purity	Protein G purified
Clonality	Monoclonal
Clone number	AE8
Myeloma	P3-X63 Ag8.3
Isotype	IgG
Light chain type	kappa

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab269574 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

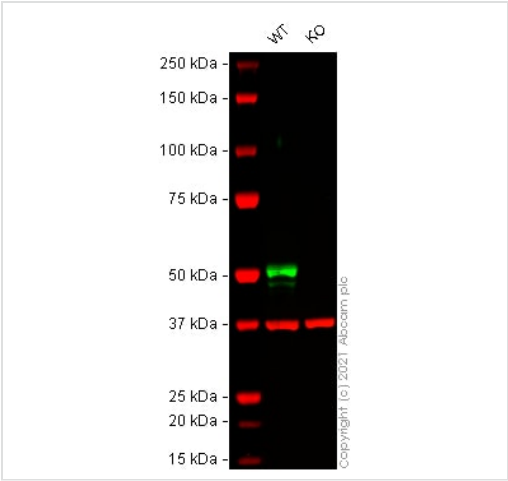
Application	Abreviews	Notes
WB		Use a concentration of 1 µg/ml. Predicted molecular weight: 50 kDa.
IHC-P		Use a concentration of 0.05 µg/ml.
ICC/IF		Use a concentration of 1 - 5 µg/ml. PubMed: 25076852
IHC-Fr		Use a concentration of 1 µg/ml.

Target

Tissue specificity	Expressed in some epidermal sweat gland ducts (at protein level) and in exocervix, esophagus and placenta.
Involvement in disease	Defects in KRT13 are a cause of white sponge nevus of cannon (WSN) [MIM:193900]. WSN is a rare autosomal dominant disorder which predominantly affects non-cornified stratified squamous epithelia. Clinically, it is characterized by the presence of soft, white, and spongy plaques in the oral mucosa. The characteristic histopathologic features are epithelial thickening, parakeratosis, and vacuolization of the suprabasal layer of oral epithelial keratinocytes. Less frequently the mucous membranes of the nose, esophagus, genitalia and rectum are involved.

Sequence similarities	Belongs to the intermediate filament family.
Post-translational modifications	O-glycosylated; glycans consist of single N-acetylglucosamine residues.

Images



Western blot - Anti-Cytokeratin 13 antibody [AE8] - BSA and Azide free (ab269574)

All lanes : Anti-Cytokeratin 13 antibody [AE8] (**ab16112**) at 1 µg/ml

Lane 1 : Wild-type A431 cell lysate
Lane 2 : KRT13 knockout A431 cell lysate

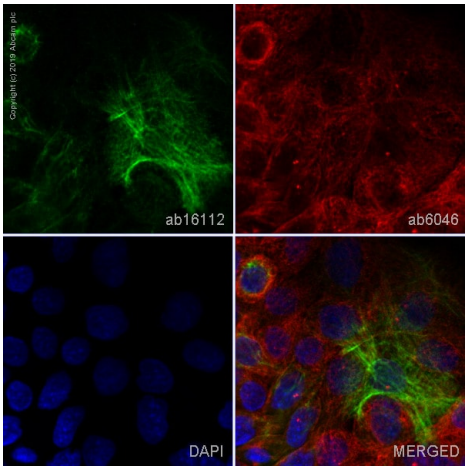
Lysates/proteins at 20 µg per lane.

Performed under reducing conditions.

Predicted band size: 50 kDa
Observed band size: 51 kDa

This image was produced using the same antibody clone but in a different formulation **ab16112**, PBS and sodium azide.

False colour image of Western blot: Anti-Cytokeratin 13 antibody [AE8] staining at 1 µg/ml, shown in green; Rabbit Anti-GAPDH antibody [EPR16891] (**ab181602**) loading control staining at 1/20000 dilution, shown in red. In Western blot, **ab16112** was shown to bind specifically to Cytokeratin 13. A band was observed at 51 kDa in wild-type A431 cell lysates with no signal observed at this size in Krt13 knockout cell line **ab269483** (knockout cell lysate **ab269647**). To generate this image, wild-type and Krt13 knockout A431 cell lysates were analysed. First, samples were run on an SDS-PAGE gel then transferred onto a nitrocellulose membrane. Membranes were blocked in 3 % milk in TBS-0.1 % Tween® 20 (TBS-T) before incubation with primary antibodies overnight at 4 °C. Blots were washed four times in TBS-T, incubated with secondary antibodies for 1 h at room temperature, washed again four times then imaged. Secondary antibodies used were Goat anti-Mouse IgG H&L (IRDye® 800CW) preabsorbed (**ab216772**) and Goat anti-Rabbit IgG H&L (IRDye® 680RD) preabsorbed (**ab216777**) at 1/20000 dilution.

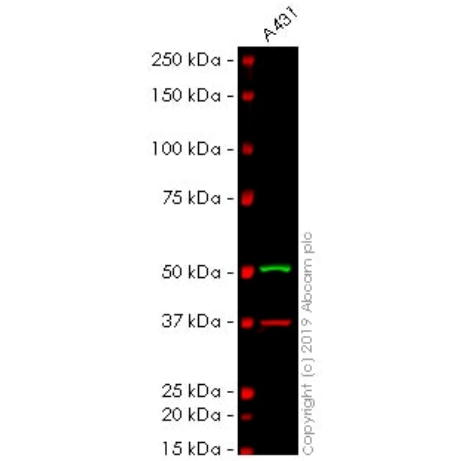


Immunocytochemistry/ Immunofluorescence - Anti-Cytokeratin 13 antibody [AE8] - BSA and Azide free (ab269574)

ab16112 staining Cytokeratin 13 in A431 cells. The cells were fixed with Methanol (5min), permeabilized with 0.1%PBS-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 **ab16112** at 5µg/ml and **ab6046**, Rabbit polyclonal to beta Tubulin - Loading Control, at 1/1000 dilution. Cells were then incubated with **ab150117**, Goat Anti-Mouse IgG H&L (Alexa Fluor® 488) at 1/1000 dilution (shown in green) and **ab150080**, Goat polyclonal Secondary Antibody to Rabbit IgG - H&L (Alexa Fluor® 594) at 1/1000 dilution (shown in pseudocolour red). Nuclear DNA was labeled with DAPI (shown in blue).

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

This image was produced using the same antibody clone but in a different formulation **ab16112**, PBS and sodium azide.



Western blot - Anti-Cytokeratin 13 antibody [AE8] - BSA and Azide free (ab269574)

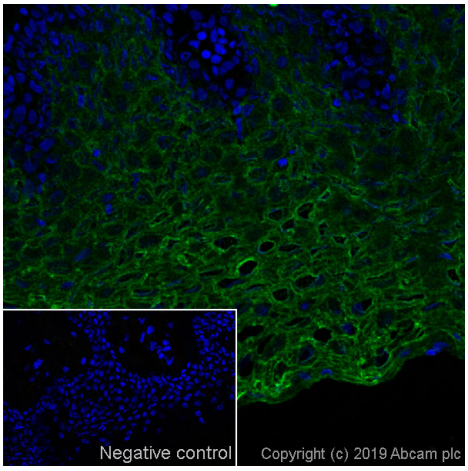
Anti-Cytokeratin 13 antibody [AE8] (**ab16112**) at 1 µg/ml + A431 whole cell lysate at 20 µg

Performed under reducing conditions.

Predicted band size: 50 kDa

This blot was produced using a 4-12% Bis-tris under the MOPS buffer system. The gel was run at 200V for 55 minutes before being transferred onto a Nitrocellulose membrane at 30V for 70 minutes. The membrane was blocked for an hour using 3% milk before **ab16112** and **ab181602** (Rabbit anti-GAPDH loading control) were incubated overnight at 4°C at a 1ug/ml concentration and 1/20000 dilution respectively. Antibody binding was detected using Goat anti-Mouse IgG H&L (IRDye® 800CW) preadsorbed (**ab216772**) and Goat anti-Rabbit IgG H&L (IRDye® 680RD) preadsorbed (**ab216777**) secondary antibodies at 1/20000 dilution for 1 hour at room temperature before imaging.

This image was produced using the same antibody clone but in a different formulation **ab16112**, PBS and sodium azide.



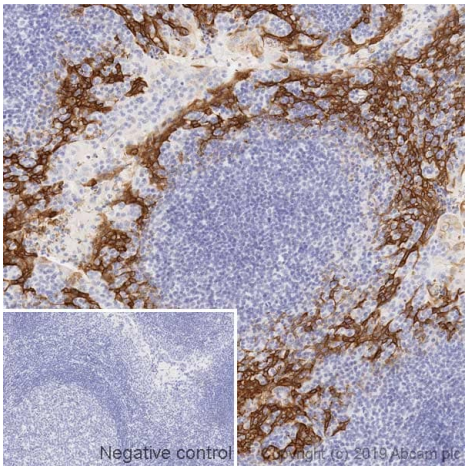
Immunohistochemistry (Frozen sections) - Anti-Cytokeratin 13 antibody [AE8] - BSA and Azide free (ab269574)

IHC image of Cytokeratin 13 staining in a section of frozen normal human tonsil*.

The section was fixed using 10% formaldehyde in 1XPBS for 10 minutes. No antigen retrieval step was performed prior to staining. Non-specific protein-protein interactions were then blocked in TBS containing 0.025% (v/v) Triton X-100, 0.3M glycine and 1% (w/v) BSA for 1h at room temperature. The section was then incubated overnight at +4°C in TBS containing 0.025% (v/v) Triton X-100 and 1% (w/v) BSA with **ab16112** at 1µg/ml. The section was then incubated with **ab150117** (Goat Anti-Mouse IgG H&L (Alexa Fluor® 488), 1/1000)) (shown in green) for 1 hour at room temperature. DAPI was used to stain the cell nuclei (blue) at a concentration of 1.43µM. The secondary-only control insert image is taken from an identical assay without primary antibody. The section was then mounted using Fluoromount®. Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8). For IHC staining systems (automated and non-automated), customers should optimize variable parameters such as antibody concentrations and incubation times.

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

This image was produced using the same antibody clone but in a different formulation **ab16112**, PBS and sodium azide.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Cytokeratin 13 antibody [AE8] - BSA and Azide free (ab269574)

IHC image of Cytokeratin 13 staining in a section of formalin-fixed paraffin-embedded normal human tonsil* performed on a Leica BOND™ system using the standard protocol F.

The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6, epitope retrieval solution 1) for 20 mins. The section was then incubated with **ab16112**, 0.05 µg/ml, for 15 mins at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with hematoxylin and mounted with DPX. The inset secondary-only control image is taken from an identical assay without primary antibody.

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

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

This image was produced using the same antibody clone but in a different formulation **ab16112**, PBS and sodium azide.

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