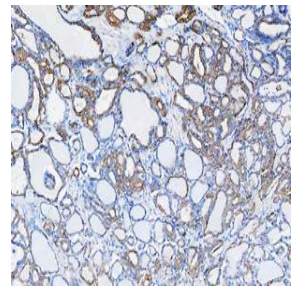
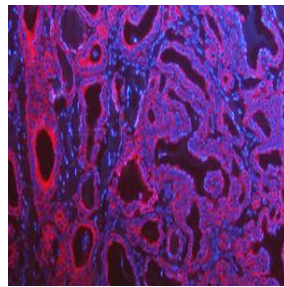
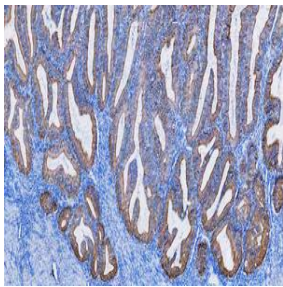
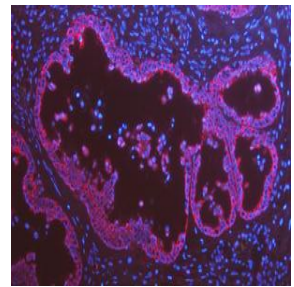
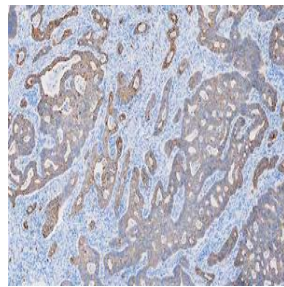
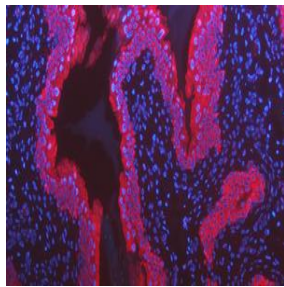


B

O

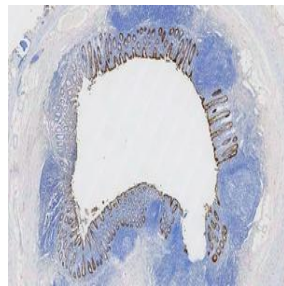
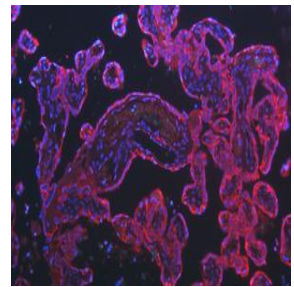


S



T

E



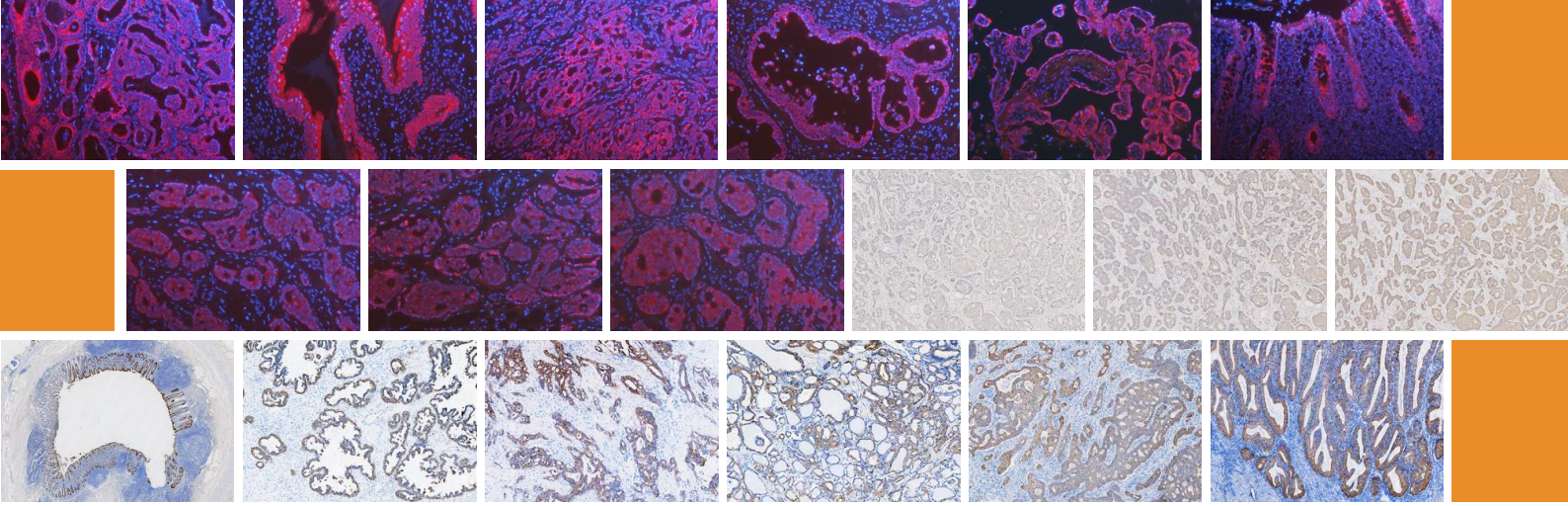
R



*All pictures displayed are experimental results of the product itself.



**KRT8 antibody,
optimized for IHC and
immunofluorescence**



KRT8 antibody, optimized for IHC and immunofluorescence

Summary

Boster Bio's KRT8 antibody (A01421) is a highly specific and sensitive tool optimized for immunohistochemistry (IHC) and immunofluorescence (IF). This antibody is validated across multiple normal and cancerous tissues and demonstrates consistent staining patterns verified by orthogonal RNA-seq data and comparison with other established antibodies.

This antibody is part of Boster Bio's PicoLumine™ Series, featuring hundreds of protein biomarkers optimized for immunohistochemistry, immunocytochemistry, and immunofluorescence. All antibodies in this product line have gone through the same level of validation as shown in this report. This product line is guaranteed under Boster Bio's **PicoLumine Guarantee**, that the antibody will work under the recommended condition on the indicated tissues and cell lines, or your money back.

Highlights

- **Specificity and Sensitivity:** High reproducibility and signal-to-noise ratio.
- **Optimized Protocols:** Reliable protocols for both IHC and IF.
- **PicoLumine Guarantee:** Guaranteed performance or your money back.

Antibody evaluation

KRT8 protein has a variety of important functions in biology, including maintaining cell structural integrity, participating in signal transduction processes, influencing cell differentiation status, interacting with other proteins, and playing a role in diseases. These functions make KRT8 protein an important target for the study of cell biology, molecular biology, and biomedicine. The KRT8(A01421) results were excellent in immunohistochemistry and immunofluorescence assays, and the antibody evaluation 5 out of 5 stars.

Antibody information

Antibody Name: Cytokeratin 8/KRT8 Antibody Picoband®

Host Species: Rabbit

Isotype: IgG (Polyclonal)

Catalog Number: A01421

Supplier: [Boster Bio](#)

Validation Findings Summary:

The KRT8 antibody demonstrated high specificity, sensitivity, and reproducibility in immunofluorescence assays. The optimized conditions provide reliable detection of KRT8 in pathologically relevant cell lines and tissues. Researchers can confidently use this antibody for KRT8 immunofluorescence studies, contributing to accurate and meaningful experimental outcomes.

Cytokeratin 8/KRT8 Introduction

Introduction and origin

The KRT8 protein is also known as keratin 8 or cytokeratin 8. Keratin 8 (KRT8) is a member of the type II keratin family clustered on the long arm of chromosome 12, and its expression product, the KRT8 protein, typically polymerizes with keratin 18 (KRT18) to form intermediate filaments in simple monolayer epithelial cells. The KRT8 protein is expressed in a variety of tissues and cells, especially in epithelial cells, and is essential for maintaining the integrity of cellular structures. This protein plays a role in maintaining cellular structural integrity and also functions in signal transduction and cellular differentiation.

Function and effect

KRT8 protein has a specific amino acid sequence and forms a specific three-dimensional structure, which allows it to form a stable intermediate filament network with other keratins. As part of the cytoskeleton, the KRT8 protein provides structural support to the cell and helps maintain the morphology and stability of the cell. KRT8 protein not only exists as a structural protein, but is also involved in signal transduction processes within cells. It can interact with other signaling molecules to influence the signaling and response mechanisms of the cell. This function allows KRT8 protein to play an important role in cell differentiation, proliferation, and apoptosis. The expression level and distribution pattern of KRT8 protein are closely related to the differentiation status of cells. During the process of cell differentiation, the expression amount and type of KRT8 protein may change, which will affect the direction and degree of cell differentiation.

Clinical significance

In disease, the structure or function of the KRT8 protein may be altered, thus affecting the normal physiological function of cells. KRT8 protein has a variety of important functions in biology, including maintaining cell structural integrity, participating in signal transduction processes, influencing cell differentiation status, interacting with other proteins, and playing a role in diseases. These functions make KRT8 protein an important target for the study of cell biology, molecular biology, and biomedicine.

Expected Staining Patterns

Cellular Localization:

KRT8 is the protein predicted to localized to the Intermediate filaments (supported).

[Location →](#)

Tissues with high expression of KRT8 (RNA):

KRT8 is known to cytoplasmic and membranous expression in most glandular epithelia, renal tubules and pneumocytes.

[Tissues expression →](#)

Cell lines with high expression of KRT8 :

According to data from ProteinAtlas.com, KRT8 is known to be detected in many cell lines.

[Cell lines expression →](#)

Antibody validation experiment design

Selection of validation tissues and cell lines

The tissue-positive controls in the following experiments are primarily based on suggestions from ProteinAtlas.com.

Positive tissues for IHC:

1. Human breast cancer(used for optimization with 3 concentrations of primary antibody)

Positive tissues for IF:

1. Human breast cancer(used for optimization with 3 concentrations of primary antibody)

Positive tissues for IHC (experimental verification):

1. Human stomach cancer, human endometrial cancer, human ovarian cancer, human thyroid cancer, human pancreas cancer, human appendix

Positive tissues for IF (experimental verification):

1. Human appendix, human placenta, rat bladder, human thyroid cancer, human ovarian cancer, human pancreas cancer

**optimization Method: we have tested 3 concentrations of the primary antibody on the selected tissue(s) to assess the best experiment conditions for immunohistochemistry and immunofluorescence. The conditions that produced the best signal with a low background were selected as the recommended experiment conditions.*

Reagents used in the experiment

1. Anti-KRT8 Antibody (A01421), Concentrations tested: 1µg/mL, 5µg/mL, 25µg/mL.
2. EDTA Buffer (pH 8.0, Epitope Retrieval Solution): Used for heat-mediated antigen retrieval.
3. Inactivation: 3% H₂O₂ for 10 min.
4. Blocking Solution: normal goat serum.
5. Secondary Antibody (IF): DyLight 594 Conjugated AffiniPure Goat Anti-rabbit IgG (H+L) (BA1142), dilution: 1:100, Incubated for 30 minutes at 37°C.
6. Secondary Antibody (IHC-P): HRP-AffiniPure Goat Anti-Rabbit IgG, dilution: 1:500, Incubated for 30 minutes at 37°C.
7. Staining (IHC-P): Add a suitable amount of DAB reagent to the samples, Observe under the microscope, and control the color development time.
8. Counterstain: DAPI (IF, AR1176); hematoxylin (IHC-P).
9. Mounting Medium: anti-fade mounting medium.

Experiment protocols

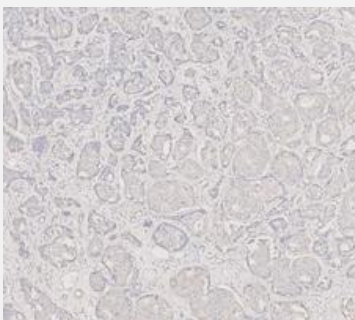
Immunohistochemistry:

Protocol reference

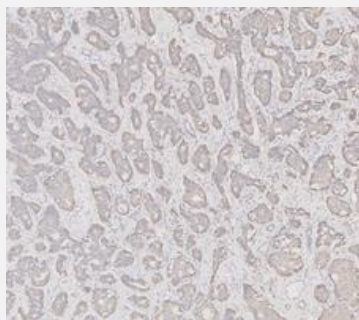
[Click to view](#)

IHC Optimization

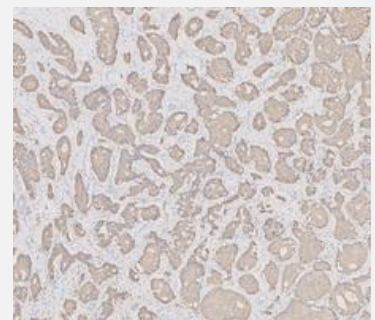
Human breast cancer tissue embedded in FFPE is used to optimize the concentration and incubation time for the antibody. 3 concentrations of rabbit anti-KRT8 Antibody (A01421) were used to incubate. 1µg/mL, 5µg/mL, 25µg/mL overnight at 4°C. The results are as follows:



Antigen Retrieval: Heat
Primary ab: 25µg/mL



Antigen Retrieval: Heat
Primary ab: 5µg/mL



Antigen Retrieval: Heat
Primary ab: 1µg/mL

Incubation: 4°C overnight

Secondary: BA3894

Imaging: Brightfield

[View Original Image →](#)

Incubation: 4°C overnight

Secondary: BA3894

Imaging: Brightfield

[View Original Image →](#)

Incubation: 4°C overnight

Secondary: BA3894

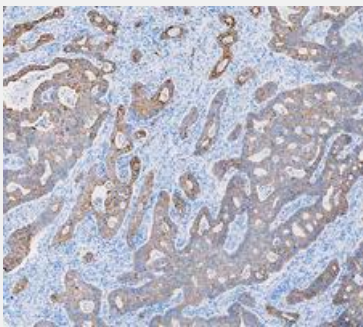
Imaging: Brightfield

[View Original Image →](#)

An in-house certified pathologist reviewed the result images and recommended the low condition (1µg/mL) be used for immunofluorescence. This condition is used to perform immunohistochemistry on other relevant normal and cancerous tissues to ensure the antibody produces expected staining patterns.

IHC Additional validations:

Cancerous tissues

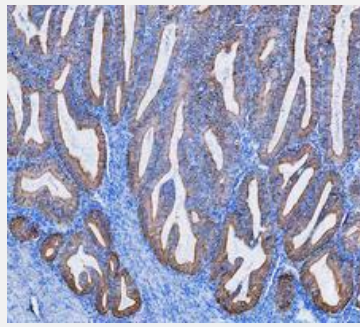


Human stomach cancer

Expected: high level

Observed: high level

[View Original Image →](#)

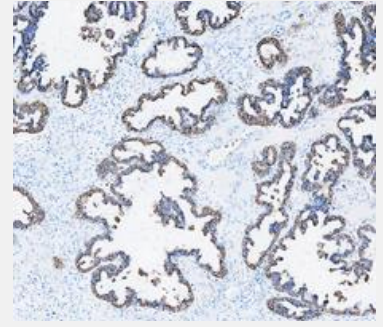


Human endometrial cancer

Expected: high level

Observed: high level

[View Original Image →](#)

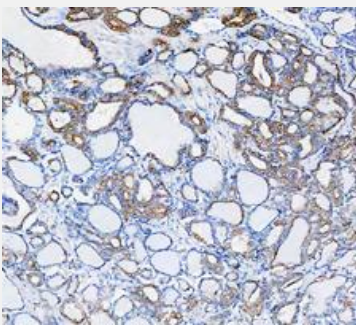


Human ovarian cancer

Expected: high level

Observed: high level

[View Original Image →](#)

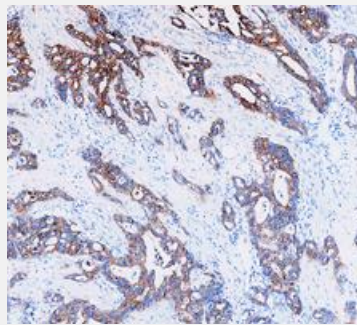


Human thyroid cancer

Expected: high level

Observed: high level

[View Original Image →](#)

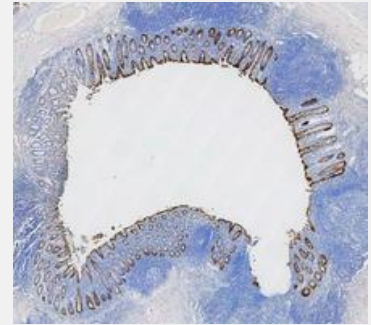


Human pancreas cancer

Expected: high level

Observed: high level

[View Original Image →](#)



Human appendix

Expected: high level

Observed: high level

[View Original Image →](#)

Tissue staining expectation reference

[Click to view](#)

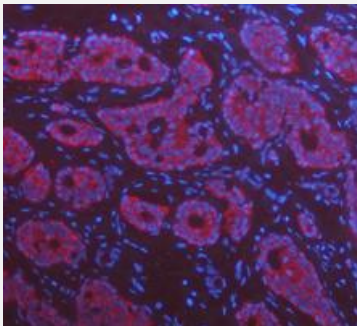
IHC scoring

5/5, Supported–Orthogonal, based on the following criteria:

1. IHC stains in the selected tissues are consistent with RNA level data.
2. IHC staining patterns in selected tissues match the expected staining patterns of this biomarker as shown in similar well-established antibodies.
3. IHC staining subcellular localization is consistent with the literature.

IF Optimization

The human breast cancer is used to optimize the concentration and incubation time for the antibody. 3 concentrations of rabbit anti-KRT8 (A01421) were used to incubate. 1µg/mL, 5µg/mL, 25µg/mL overnight at 4°C. The results are as follows:



Human breast cancer

Primary ab: 25µg/mL

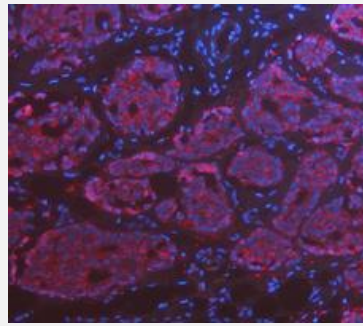
Incubation: 4°C overnight

Secondary: BA1142

Imaging: Fluorescent

Microscopy

[View Original Image →](#)



Human breast cancer

Primary ab: 5µg/mL

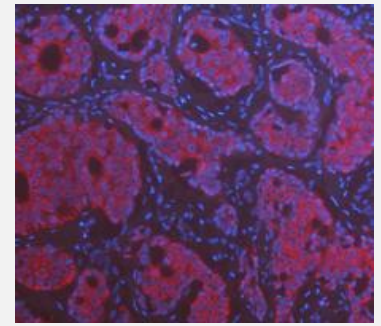
Incubation: 4°C overnight

Secondary: BA1142

Imaging: Fluorescent

Microscopy

[View Original Image →](#)



Human breast cancer

Primary ab: 1µg/mL

Incubation: 4°C overnight

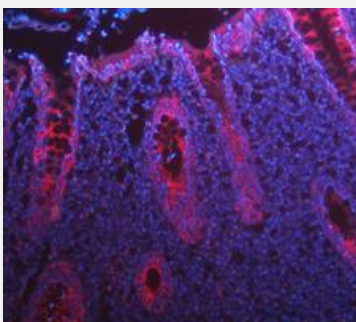
Secondary: BA1142

Imaging: Fluorescent

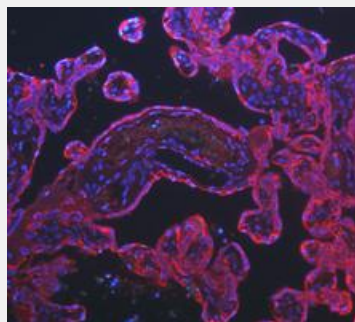
Microscopy

[View Original Image →](#)

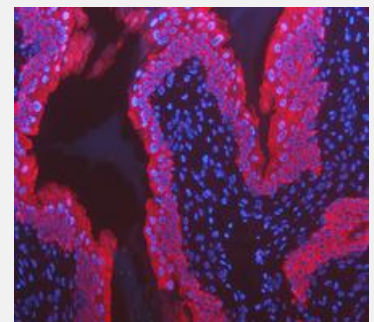
An in house certified pathologist reviewed the result images recommended the high medium (5µg/mL) be used for immunofluorescence. This condition is used to perform immunohistochemistry on other relevant tissues to ensure the antibody produces expected staining patterns.



Human appendix



Human placenta



Rat bladder

Expected: high level

Observed: high level

[View Original Image →](#)

Expected: high level

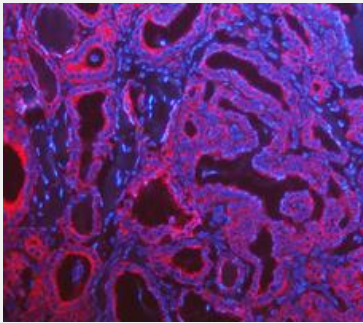
Observed: high level

[View Original Image →](#)

Expected: high level

Observed: high level

[View Original Image →](#)

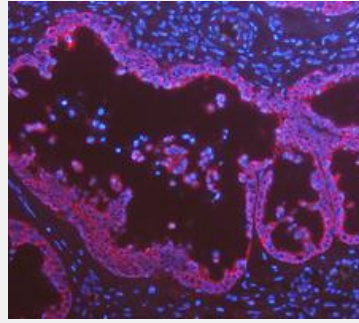


Human thyroid cancer

Expected: high level

Observed: high level

[View Original Image →](#)

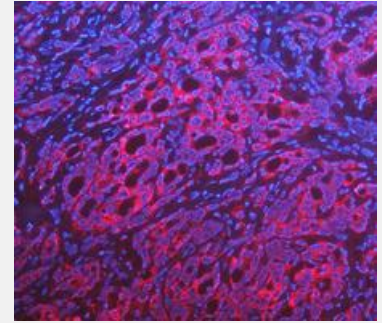


Human ovarian cancer

Expected: high level

Observed: high level

[View Original Image →](#)



Human pancreas cancer

Expected: high level

Observed: medium level

[View Original Image →](#)

ICC/IF scoring

5/5, Supported–Orthogonal, based on the following criteria:

1. IF stains in the selected tissue line are consistent with RNA level data.
2. IF staining subcellular localization is consistent with literature and other established antibodies for this biomarker.

Company Profile



30+years of technique improvement



20000+ antibodies and 2000+ ELISA kits



60000+ cited publications



Driven by user's need

Boster Bio has been dedicated to providing affordable high-sensitivity, high-specificity ELISA kits, and WB/IHC compatible antibodies since its establishment in 2003. We offer antibodies rigorously validated for IHC, WB, ELISA, and Flow Cytometry, striving to deliver the highest-quality service and earn the trust of researchers globally. Low-cost antibody packages for rare organisms and free validation for antibodies are provided now. Free E-books, blogs, and educational pathway maps are also offered on our website. We are ready to serve any customer at any time.



BOSTER
antibody and ELISA experts



(888) 466-3604



www.bosterbio.com



3942 Valley Ave, Pleasanton,
CA 94566, USA



support@bosterbio.com