Overview

Product name
Anti-Cytokeratin 18 antibody [RGE53]

Description
Mouse monoclonal [RGE53] to Cytokeratin 18

Host species
Mouse

Specificity
This antibody reacts exclusively with cytokeratin 18 which is present in glandular epithelial cells of the digestive, respiratory, and urogenital tracts, endocrine and exocrine cells and mesothelial cells, as well as adenocarcinomas originating from them.

Tested applications
Suitable for: ICC/IF, Dot blot, Flow Cyt, IHC-Fr, WB

Species reactivity
Reacts with: Human, Pig, Zebrafish

Predicted to work with: Mouse, Rat, Rabbit, Chicken, Hamster, Dog

Immunogen
Cytoskeletal preparation of cells

Positive control
This antibody gave a positive signal in HeLa and MCF7 whole cell lysates.

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 or -80°C. Avoid freeze / thaw cycle.

Storage buffer
Preservative: 0.09% Sodium azide
Constituent: PBS

Purity
Protein G purified

Clonality
Monoclonal

Clone number
RGE53

Myeloma
unknown

Isotype
IgG1

Applications

Our Abpromise guarantee covers the use of ab9217 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.
<table>
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<tr>
<th>Application</th>
<th>Abreviews</th>
<th>Notes</th>
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<tbody>
<tr>
<td>ICC/IF</td>
<td><img src="https://www.abreviews.com/rating.png" alt="Rating" /></td>
<td>Use at an assay dependent concentration.</td>
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<tr>
<td>Dot blot</td>
<td>1/100 - 1/1000.</td>
<td></td>
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<tr>
<td>Flow Cyt</td>
<td>Use 1µg for 10^6 cells.</td>
<td>ab170190 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.</td>
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<tr>
<td>IHC-Fr</td>
<td>1/100 - 1/200.</td>
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<tr>
<td>WB</td>
<td>Use a concentration of 5 µg/ml. Detects a band of approximately 48 kDa (predicted molecular weight: 48 kDa).</td>
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**Target**

**Function**
Involved in the uptake of thrombin-antithrombin complexes by hepatic cells (By similarity). When phosphorylated, plays a role in filament reorganization. Involved in the delivery of mutated CFTR to the plasma membrane. Together with KRT8, is involved in interleukin-6 (IL-6)-mediated barrier protection.

**Tissue specificity**
Expressed in colon, placenta, liver and very weakly in exocervix. Increased expression observed in lymph nodes of breast carcinoma.

**Involvement in disease**
Defects in KRT18 are a cause of cirrhosis (CIRRH) [MIM:215600].

**Sequence similarities**
Belongs to the intermediate filament family.

**Post-translational modifications**
Phosphorylation at Ser-34 increases during mitosis. Hyperphosphorylated at Ser-53 in diseased cirrhosis liver. Phosphorylation increases by IL-6.
Proteolytically cleaved by caspases during epithelial cell apoptosis. Cleavage occurs at Asp-238 by either caspase-3, caspase-6 or caspase-7.
O-glycosylated at multiple sites; glycans consist of single N-acetylglycosamine residues.

**Cellular localization**
Cytoplasm > perinuclear region.

**Images**
All lanes: Anti-Cytokeratin 18 antibody [RGE53] (ab9217) at 5 µg/ml

Lane 1: HeLa (Human epithelial carcinoma cell line) Whole Cell Lysate
Lane 2: MCF7 (Human breast adenocarcinoma cell line) Whole Cell Lysate

Lysates/proteins at 20 µg per lane.

Secondary
All lanes: Goat Anti-Mouse IgG H&L (HRP) preadsorbed (ab97040) at 1/5000 dilution

Developed using the ECL technique.

Performed under reducing conditions.

Predicted band size: 48 kDa
Observed band size: 48 kDa

Exposure time: 30 seconds

Immunohistochemistry on frozen section of human kidney epithelium.
Immunohistochemistry (Frozen sections) - Anti-Cytokeratin 18 antibody [RGE53] (ab9217)

Immunofluorescence staining images of 9 day old zebrafish embryos.
ab9217 reacts with intestinal epithelium and epidermis. Frozen sample treated with Acetone:Methanol 1:1, antibody diluted 1/100 and incubated for 45 minutes at room temperature.

Immunohistochemistry (Frozen sections) - Anti-Cytokeratin 18 antibody [RGE53] (ab9217)

immunofluorescence staining of epithelial tissues in a 2 days old zebrafish embryo.
Immunohistochemistry (Frozen sections) - Anti-Cytokeratin 18 antibody [RGE53] (ab9217)

Immunofluorescence staining of 1 month old zebrafish embryo.

Immunofluorescence staining images of 9 day old zebrafish embryos.

ab9217 reacts with intestinal epithelium and epidermis. Frozen sample treated with Acetone:Methanol 1:1, antibody diluted 1/100 and incubated for 45 minutes at room temperature.
ab9217 at a 1/100 dilution staining Cytokeratin 18 in human adipose tissue-derived stromal cells by Immunocytochemistry/Immunofluorescence.

Immunohistochemistry on frozen section of human kidney epithelium
Immunohistochemistry on frozen section of human colon

Immunohistochemistry on frozen section of swine liver hepatocytes

Overlay histogram showing MCF7 cells stained with ab9217 (red line). The cells were fixed with 4% paraformaldehyde (10 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab9217, 1µg/1x10^6 cells) for 30 min at 22°C. The secondary antibody used was DyLight® 488 goat anti-mouse IgG (H+L) (ab96879) at 1/500 dilution for 30 min at 22°C. Isotype control antibody (black line) was mouse IgG1 [ICIGG1] (ab91353, 2µg/1x10^6 cells) used under the same conditions. Unlabelled sample (blue line). Acquisition of >5,000 events were collected using a 20mW Argon ion laser (488nm) and 525/30 bandpass filter. This antibody gave a positive signal in MCF7 cells fixed with 80% methanol (5 min)/permeabilized with 0.1% PBS-Tween for 20 min used under the same conditions.

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