abcam

Product datasheet

Anti-CD10 antibody [EPR22865-73] ab255609

KO VALIDATED Recombinant RabMAb

2 References 14 Images

Overview

Product name	Anti-CD10 antibody [EPR22865-73]
Description	Rabbit monoclonal [EPR22865-73] to CD10
Host species	Rabbit
Specificity	IHC application is recommended for human only.
Tested applications	**Suitable for:** WB, IHC-P, ICC/IF, IP, mIHC **Unsuitable for:** Flow Cyt
Species reactivity	**Reacts with:** Mouse, Rat, Human
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
Positive control	WB: Human placenta tisssue lysate; rat kidney and liver lysates; Raji, Ramos and HAP1 whole cell lysates; rat kidney and liver lysates; mouse kidney lysate. IHC-P: Human kidney, breast, liver and tonsil tissue, human diffuse large B-cell lymphoma ICC/IF: Raji and Ramos cells. IP: Raji whole cell lysate. mIHC: Human breast and endometrium tissues.
General notes	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 production For more information **see here**. Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to **RabMAb® patents**.

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 long term. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.2 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Purity	Protein A purified

Clonality	Monoclonal
Clone number	EPR22865-73
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab255609 in the following tested applications.

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

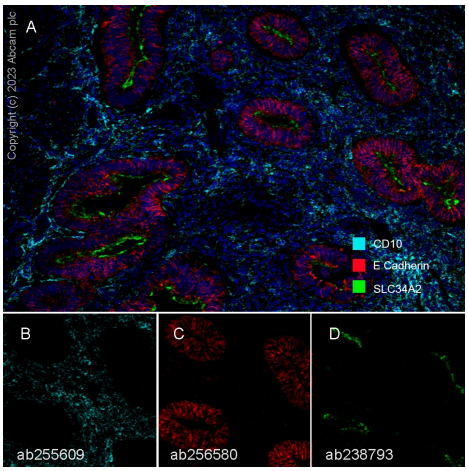
Application	Abreviews	Notes
WB		1/1000. Detects a band of approximately 100 kDa (predicted molecular weight: 85 kDa).
IHC-P		1/1000. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol. IHC application is recommended for human only.
ICC/IF		1/50.
IP		1/30.
mIHC		1/1000.

Application notes Is unsuitable for Flow Cyt.

Target

Function	Thermolysin-like specificity, but is almost confined on acting on polypeptides of up to 30 amino acids. Biologically important in the destruction of opioid peptides such as Met- and Leu-enkephalins by cleavage of a Gly-Phe bond. Able to cleave angiotensin-1, angiotensin-2 and angiotensin 1-9. Involved in the degradation of atrial natriuretic factor (ANF). Displays UV-inducible elastase activity toward skin preelastic and elastic fibers.
Sequence similarities	Belongs to the peptidase M13 family.
Cellular localization	Cell membrane.

Images



Multiplex immunohistochemistry - Anti-CD10 antibody [EPR22865-73] (ab255609)

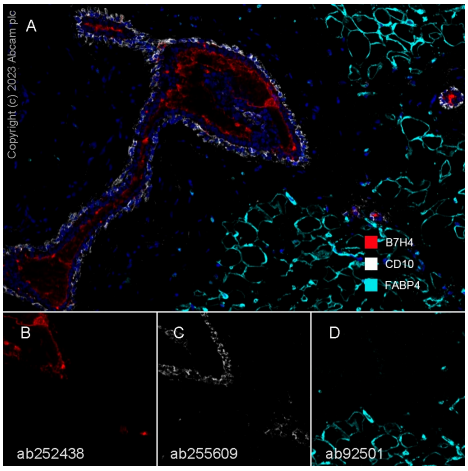
Fluorescence multiplex immunohistochemical analysis of the human endometrium (Formalin/PFA-fixed paraffin-embedded sections).

Panel A: merged staining of anti-E Cadherin (**ab256580**, red; Opal™690), anti-SLC34A2 (**ab238793**, green; Opal™520) and anti-CD10 (ab255609, cyan; Opal™570) on human endometrium. Panel B: anti-CD10 stained on stromal cells. Panel C: anti-E Cadherin stained on glandular cells. Panel D: anti-SLC34A2 stained on apical membrane of glandular cells. Opal Polymer HRP Ms + Rb was used as a secondary antibody.

The section was incubated in three rounds of staining: in the order of **ab256580** at 1/3000 dilution (0.324 µg/ml) for 30mins, **ab238793** at 1/1000 dilution (2.26 µg/ml) for 10mins and ab255609 at 1/1000 dilution (0.615 µg/ml) for 30 mins at room temperature. Each round was followed by a separate fluorescent tyramide signal amplification system.

The immunostaining was performed on a Leica Biosystems BOND® RX instrument with an Opal™ 4-color kit. Image acquisition was performed with Leica SP8 confocal microscope.

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins. DAPI (blue) was used as a nuclear counter stain.



Multiplex immunohistochemistry - Anti-CD10 antibody [EPR22865-73] (ab255609)

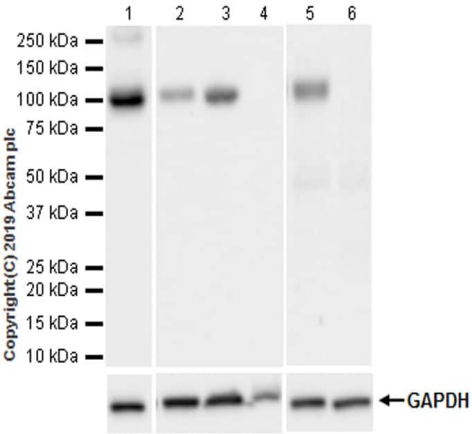
Fluorescence multiplex immunohistochemical analysis of the human breast (Formalin/PFA-fixed paraffin-embedded sections).

Panel A: merged staining of anti-B7H4 (**ab252438**, red; Opal™690), anti-CD10 (ab255609, gray; Opal™520) and anti-FABP4 (**ab92501**, cyan; Opal™570) on human breast. Panel B: anti-B7H4 stained on glandular lumens. Panel C: anti-CD10 stained on myoepithelial cells. Panel D: anti-FABP4 stained on adipocytes. Opal Polymer HRP Ms + Rb was used as a secondary antibody.

The section was incubated in three rounds of staining: in the order of **ab252438** at 1/100 dilution (4.69 µg/ml), ab255609 at 1/1000 dilution (0.615 µg/ml) and **ab92501** at 1/10000 dilution (0.047 µg/ml) for 30 mins at room temperature. Each round was followed by a separate fluorescent tyramide signal amplification system.

The immunostaining was performed on a Leica Biosystems BOND® RX instrument with an Opal™ 4-color kit. Image acquisition was performed with Leica SP8 confocal microscope.

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins. DAPI (blue) was used as a nuclear counter stain.



Western blot - Anti-CD10 antibody [EPR22865-73] (ab255609)

All lanes : Anti-CD10 antibody [EPR22865-73] (ab255609) at 1/1000 dilution

Lane 1 : Human placenta tissue lysate
Lane 2 : Raji (human Burkitt's lymphoma cell line) whole cell lysate
Lane 3 : Ramos (human Burkitt's lymphoma cell line) whole cell lysate
Lane 4 : HT-29 (human colorectal adenocarcinoma cell line) whole cell lysate
Lane 5 : Wild-type HAP1 whole cell lysate
Lane 6 : CD10 knockout HAP1 whole cell lysate

Lysates/proteins at 20 µg per lane.

Secondary
Lane 1 : VeriBlot for IP Detection Reagent (HRP) (**ab131366**) at 1/1000 dilution
Lanes 2-4 : Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/100000 dilution

Predicted band size: 85 kDa
Observed band size: 100 kDa

ab255609 was shown to specifically react with CD10 in wild-type HAP1 cells as signal was lost in CD10 knockout cells. Wild-type and CD10 knockout samples were subjected to SDS-PAGE. ab255609 and **ab181602** (Rabbit anti-GAPDH loading control) were incubated 1 hour at room temperature at 1/1000 dilution and 1/200,000 dilution respectively. Blots were developed with Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (**ab97051**) secondary antibody at 1/100,000 dilution for 1 hour at room temperature before imaging. The blot was developed on a BIO-RAD® ChemiDoc™ MP instrument using the ECL technique.

Lanes 5-6 in this blot were developed using a higher sensitivity ECL substrate.

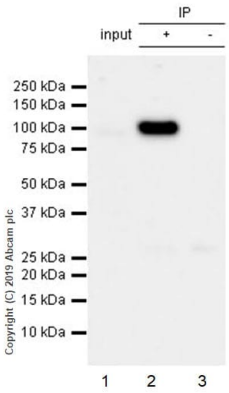
Blocking and dilution buffer: 5% NFDM/TBST.

Exposure times.

Lane 1: 10 seconds; Lanes 2-4: 15 seconds; Lanes 5-6: 70 seconds.

The molecular weight observed is consistent with what has been described in the literature (PMID:15286660).

Negative control: HT-29 (PMID:19828468).

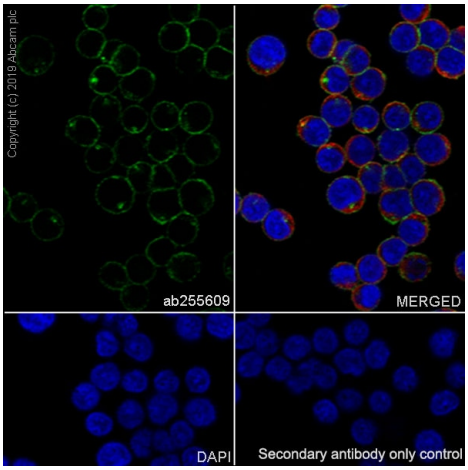


Immunoprecipitation - Anti-CD10 antibody [EPR22865-73] (ab255609)

CD10 was immunoprecipitated from 0.35 mg of Raji (human Burkitt's lymphoma cell line) whole cell lysate with ab255609 at 1/30 dilution. Western blot was performed from the immunoprecipitate using ab255609 at 1/1000 dilution. VeriBlot for IP Detection Reagent (HRP) (**ab131366**), was used as secondary antibody at 1/5000 dilution.

Lane 1: Raji whole cell lysate 10 µg (Input).
Lane 2: ab255609 IP in Raji whole cell lysate.
Lane 3: Rabbit monoclonal IgG (**ab172730**) instead of ab255609 in Raji whole cell lysate.

Blocking and dilution buffer and concentration: 5% NFDM/TBST.
Exposure time: 30 seconds.

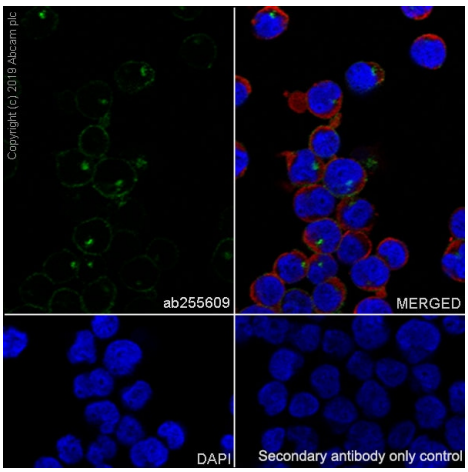


Immunocytochemistry/ Immunofluorescence - Anti-CD10 antibody [EPR22865-73] (ab255609)

Immunofluorescent analysis of 100% methanol-fixed Ramos (human Burkitt's lymphoma cell line) cells labeling CD10 with ab255609 at 1/50 dilution, followed by Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (**ab150077**) secondary antibody at 1/1000 dilution (green). Confocal image showing cytoplasmic and membranous staining in Ramos cell line. The nuclear counter stain is DAPI (blue). Tubulin is detected with Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) (**ab195889**) at 1/200 dilution (red).

Secondary antibody only control: Used PBS instead of primary antibody, followed by Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (**ab150077**) secondary antibody at 1/1000 dilution.

100% methanol was preferred as fixative.

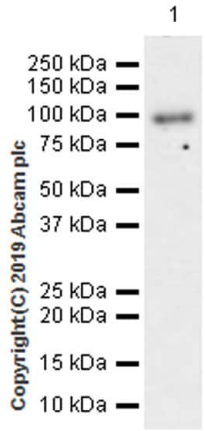


Immunocytochemistry/ Immunofluorescence - Anti-CD10 antibody [EPR22865-73] (ab255609)

Immunofluorescent analysis of 100% methanol-fixed Raji (human Burkitt's lymphoma cell line) cells labeling CD10 with ab255609 at 1/50 dilution, followed by Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (**ab150077**) secondary antibody at 1/1000 dilution (green). Confocal image showing cytoplasmic and membranous staining in Raji cell line. The nuclear counter stain is DAPI (blue). Tubulin is detected with Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) (**ab195889**) at 1/200 dilution (red).

Secondary antibody only control: Used PBS instead of primary antibody, followed by Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (**ab150077**) secondary antibody at 1/1000 dilution.

100% methanol was preferred as fixative.



Western blot - Anti-CD10 antibody [EPR22865-73] (ab255609)

Anti-CD10 antibody [EPR22865-73] (ab255609) at 1/1000 dilution + Mouse kidney tissue lysate at 20 µg

Secondary

Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/100000 dilution

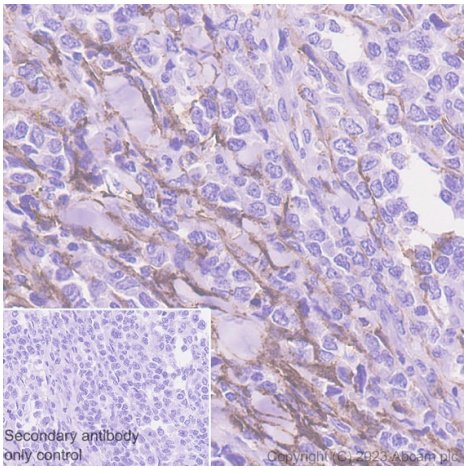
Predicted band size: 85 kDa

Observed band size: 100 kDa

Exposure time: 3 minutes

Blocking and dilution buffer: 5% NFDM/TBST.

The molecular weight observed is consistent with what has been described in the literature (PMID:15286660).

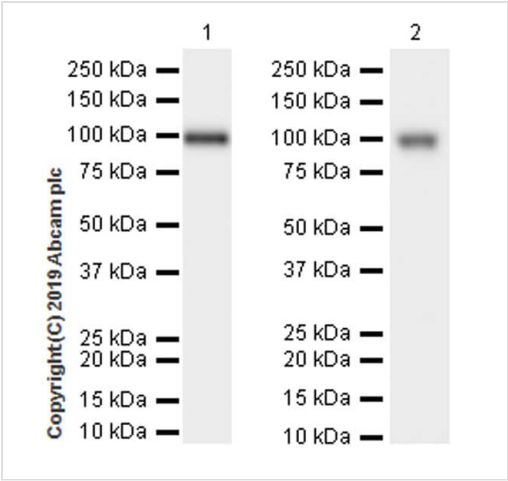


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD10 antibody [EPR22865-73] (ab255609)

Immunohistochemical analysis of paraffin-embedded Human diffuse large B-cell lymphoma labelling CD10 with ab255609 at 1/1000 dilution, followed by a Goat Anti-Rabbit IgG H&L (HRP polymer) ready to use (**ab214880**). Positive staining on human diffuse large B-cell lymphoma is observed. Counter stained with hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is a Goat Anti-Rabbit IgG H&L (HRP polymer) ready to use.

Heat mediated antigen retrieval using **ab93684** (Tris/EDTA buffer, pH 9.0).



Western blot - Anti-CD10 antibody [EPR22865-73] (ab255609)

All lanes : Anti-CD10 antibody [EPR22865-73] (ab255609) at 1/1000 dilution

Lane 1 : Rat kidney tissue lysate

Lane 2 : Rat liver tissue lysate

Lysates/proteins at 20 µg per lane.

Secondary

All lanes : Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/100000 dilution

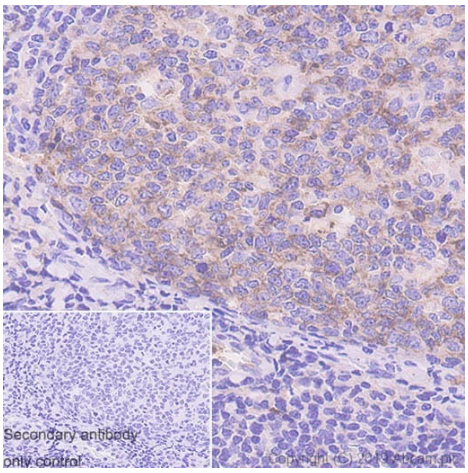
Predicted band size: 85 kDa

Observed band size: 100 kDa

Exposure time: 15 seconds

Blocking and dilution buffer: 5% NFDM/TBST.

The molecular weight observed is consistent with what has been described in the literature (PMID:15286660).

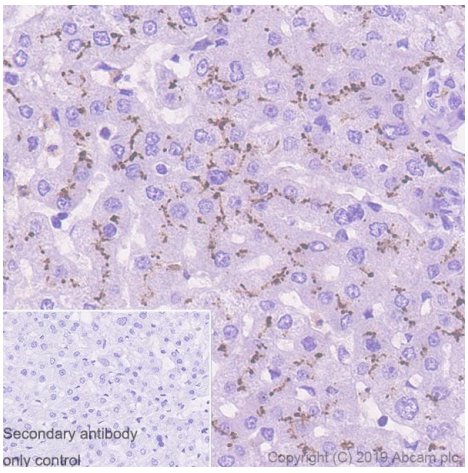


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD10 antibody [EPR22865-73] (ab255609)

Immunohistochemical analysis of paraffin-embedded human tonsil tissue labeling CD10 with ab255609 at 1/1000 dilution, followed by a Goat Anti-Rabbit IgG H&L (HRP) ready to use. Membranous staining on germinal center of human tonsil (PMID:10843287) is observed. Counter stained with hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is a Goat Anti-Rabbit IgG H&L (HRP) ready to use.

Heat mediated antigen retrieval using **ab93684** (Tris/EDTA buffer, pH 9.0).

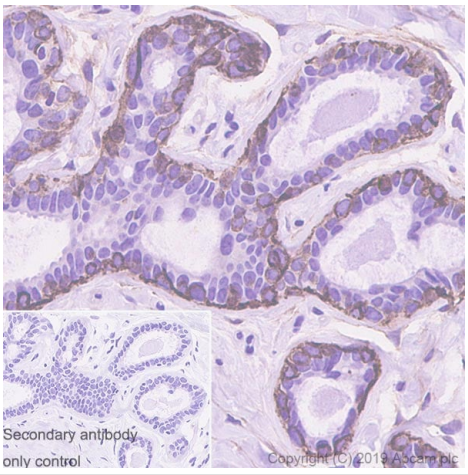


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD10 antibody [EPR22865-73] (ab255609)

Immunohistochemical analysis of paraffin-embedded human liver tissue labeling CD10 with ab255609 at 1/1000 dilution, followed by a Goat Anti-Rabbit IgG H&L (HRP) ready to use. Membranous staining on intrahepatic canaliculi of human liver (PMID:10705818) is observed. Counter stained with hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is a Goat Anti-Rabbit IgG H&L (HRP) ready to use.

Heat mediated antigen retrieval using **ab93684** (Tris/EDTA buffer, pH 9.0).

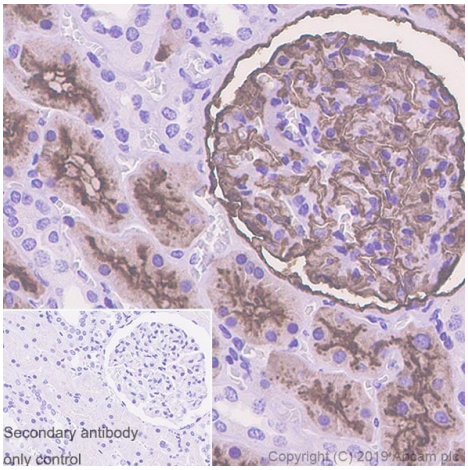


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD10 antibody [EPR22865-73] (ab255609)

Immunohistochemical analysis of paraffin-embedded human breast tissue labeling CD10 with ab255609 at 1/1000 dilution, followed by a ready to use Goat Anti-Rabbit IgG H&L (HRP) ready to use. Membranous staining on myoepithelial cells of human breast (PMID:10705818, 17143263) is observed. Counter stained with hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is a Goat Anti-Rabbit IgG H&L (HRP) ready to use.

Heat mediated antigen retrieval using **ab93684** (Tris/EDTA buffer, pH 9.0).

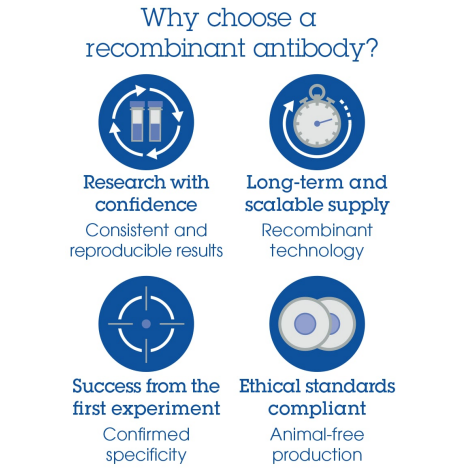


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD10 antibody [EPR22865-73] (ab255609)

Immunohistochemical analysis of paraffin-embedded human kidney tissue labeling CD10 with ab255609 at 1/1000 dilution, followed by a Goat Anti-Rabbit IgG H&L (HRP) ready to use. Positive staining on proximal convoluted tubules and glomerular epithelial cells of human kidney (PMID:10705818) is observed. Counter stained with hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is a Goat Anti-Rabbit IgG H&L (HRP) ready to use.

Heat mediated antigen retrieval using **ab93684** (Tris/EDTA buffer, pH 9.0).



Anti-CD10 antibody [EPR22865-73] (ab255609)

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