

### Anti-CD13 antibody [EPR4059] ab108382

KO 評価済 リコンビナント RabMAb

★★★★★ [3 Abreviews](#) [7 References](#) [画像数 17](#)

#### 製品の概要

製品名	Anti-CD13 antibody [EPR4059]
製品の詳細	Rabbit monoclonal [EPR4059] to CD13
由来種	Rabbit
アプリケーション	<b>適用あり:</b> ICC/IF, WB, IP, IHC-P <b>適用なし:</b> Flow Cyt
種交差性	<b>交差種:</b> Rat, Human
免疫原	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
ポジティブ・コントロール	WB: PANC1, HEK293, THP-1, U937, and A375 cell lysates. ICC/IF: A375 and THP-1 cells. IHC-P: Human kidney tissue
特記事項	<p>This product is a recombinant monoclonal antibody, which offers several advantages including:</p> <ul style="list-style-type: none"> <li>- High batch-to-batch consistency and reproducibility</li> <li>- Improved sensitivity and specificity</li> <li>- Long-term security of supply</li> <li>- Animal-free production</li> </ul> <p>For more information <a href="#">see here</a>.</p> <p>Our RabMAb<sup>®</sup> technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to <a href="#">RabMAb<sup>®</sup> patents</a>.</p> <p>Mouse: We have preliminary internal testing data to indicate this antibody may not react with this species. Please contact us for more information.</p>

#### 製品の特性

製品の状態	Liquid
保存方法	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. Stable for 12 months at -20°C.
バッファー	pH: 7.20 Preservative: 0.01% Sodium azide Constituents: 59% PBS, 40% Glycerol (glycerin, glycerine), 0.5% BSA
精製度	Protein A purified

ポリ/モノ	モノクローナル
クローン名	EPR4059
アイソタイプ	IgG

## アプリケーション

**The Abpromise guarantee**      **Abpromise保証は、**次のテスト済みアプリケーションにおけるab108382の使用に適用されます  
アプリケーションノートには、推奨の開始希釈率がありますが、適切な希釈率につきましてはご検討ください。

アプリケーション	Abreviews	特記事項
ICC/IF		1/500. <b>For unpurified use at 1/50 - 1/100.</b>
WB		1/1000 - 1/10000. Detects a band of approximately 150 kDa (predicted molecular weight: 110 kDa).
IP		1/10 - 1/100.
IHC-P	★★★★★ (1)	1/750. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol. Perform antigen retrieval before commencing with IHC staining protocol. See <b><u>IHC antigen retrieval protocols.</u></b> <b>For unpurified use at 1/100 - 1/250.</b>

**追加情報**      Is unsuitable for Flow Cyt.

## ターゲット情報

<b>機能</b>	Broad specificity aminopeptidase. Plays a role in the final digestion of peptides generated from hydrolysis of proteins by gastric and pancreatic proteases. May play a critical role in the pathogenesis of cholesterol gallstone disease. May be involved in the metabolism of regulatory peptides of diverse cell types including small intestinal and tubular epithelial cells, macrophages, granulocytes and synaptic membranes from the CNS. Found to cleave antigen peptides bound to major histocompatibility complex class II molecules of presenting cells and to degrade neurotransmitters at synaptic junctions. Is also implicated as a regulator of IL-8 bioavailability in the endometrium, and therefore may contribute to the regulation of angiogenesis. Is used as a marker for acute myeloid leukemia and plays a role in tumor invasion. In case of human coronavirus 229E (HCoV-229E) infection, serves as receptor for HCoV-229E spike glycoprotein. Mediates as well human cytomegalovirus (HCMV) infection.
<b>組織特異性</b>	Expressed in epithelial cells of the kidney, intestine, and respiratory tract; granulocytes, monocytes, fibroblasts, endothelial cells, cerebral pericytes at the blood-brain barrier, synaptic membranes of cells in the CNS. Also expressed in endometrial stromal cells, but not in the endometrial glandular cells. Found in the vasculature of tissues that undergo angiogenesis and in malignant gliomas and lymph node metastases from multiple tumor types but not in blood vessels of normal tissues. A soluble form has been found in plasma. It is found to be elevated in plasma and effusions of cancer patients.
<b>配列類似性</b>	Belongs to the peptidase M1 family.
<b>ドメイン</b>	Amino acids 260-353 are essential to mediate susceptibility to infection with HCoV-229E (in

porcine/human chimeric studies) and more specifically amino acids 288-295 (mutagenesis studies).

## 翻訳後修飾

Sulfated.

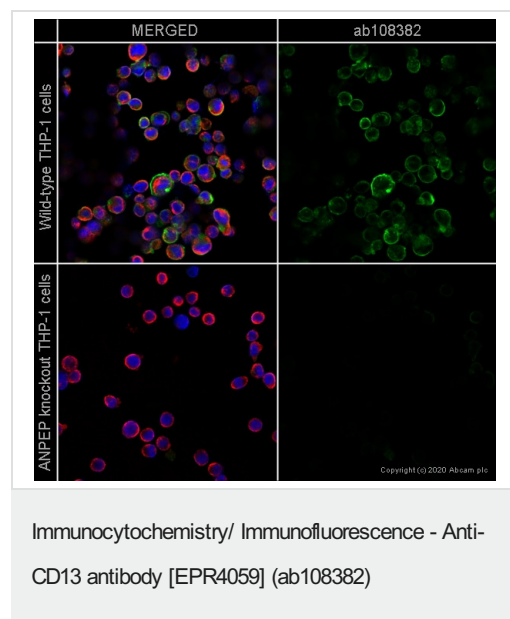
N- and O-glycosylated.

May undergo proteolysis and give rise to a soluble form.

## 細胞内局在

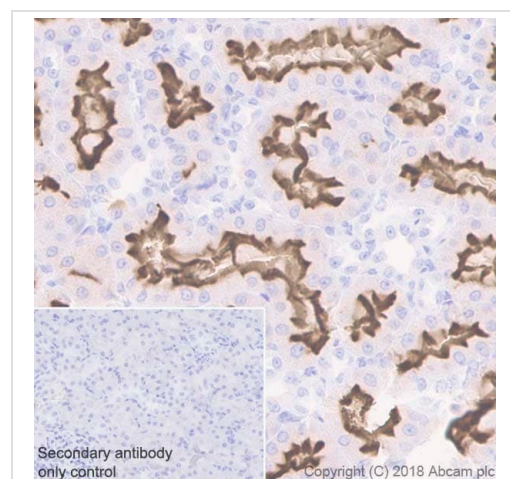
Cell membrane. Cytoplasm > cytosol. A soluble form has also been detected.

## 画像

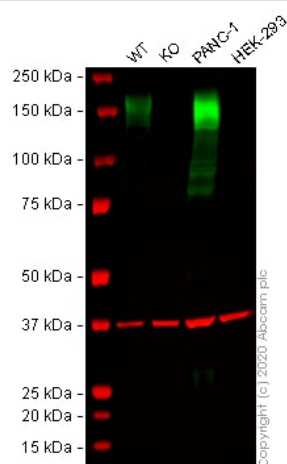


ab108382 staining CD13 in wild-type THP-1 cells (top panel) and ANPEP knockout THP-1 cells (bottom panel) ([ab273759](#)). The cells were fixed with 100% methanol (5 min) then permeabilized with 0.1% Tween for 5 minutes and then blocked with 1% BSA/10% normal goat serum/0.3M glycine in 0.1% PBS-Tween for 1h. The cells were then incubated with ab108382 at 1/1000 dilution and [ab7291](#) (Mouse monoclonal to alpha Tubulin) at 1/1000 dilution overnight at 4°C followed by a further incubation at room temperature for 1h with a goat secondary antibody to rabbit IgG (Alexa Fluor® 488) ([ab150081](#)) at 2 µg/ml (shown in green) and a goat secondary antibody to mouse IgG (Alexa Fluor® 594) ([ab150120](#)) at 2 µg/ml (shown in red). Nuclear DNA was labelled in blue with DAPI.

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



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of rat kidney tissue sections labeling CD13 with Purified ab108382 at 1:750 dilution (0.5 µg/ml). Heat mediated antigen retrieval was performed using [ab93684](#) (Tris/EDTA buffer, pH 9.0). Tissue was counterstained with Hematoxylin. ImmunoHistoProbe one step HRP Polymer (ready to use). PBS instead of the primary antibody was used as the negative control.



Western blot - Anti-CD13 antibody [EPR4059]  
(ab108382)

**All lanes** : Anti-CD13 antibody [EPR4059] (ab108382) at 1/1000 dilution

**Lane 1** : Wild-type THP-1 cell lysate

**Lane 2** : ANPEP knockout THP-1 cell lysate

**Lane 3** : PANC-1 cell lysate

**Lane 4** : HEK-293 cell lysate

Lysates/proteins at 30 µg per lane.

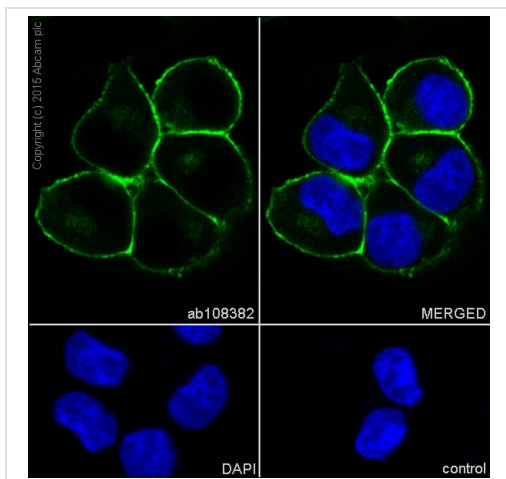
Performed under reducing conditions.

**Predicted band size:** 110 kDa

**Observed band size:** 160 kDa

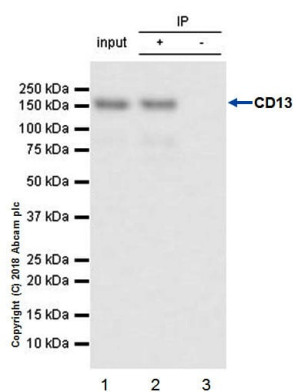
**Lanes 1 - 4:** Merged signal (red and green). Green - ab108382 observed at 160 kDa. Red - loading control **ab8245** (Mouse anti-GAPDH antibody [6C5]) observed at 37kDa.

ab108382 was shown to react with CD13 in wild-type THP-1 cells in western blot with loss of signal observed in ANPEP knockout cell line **ab273759** (knockout cell lysate **ab275505**). Wild-type and ANPEP knockout THP-1 cell lysates were subjected to SDS-PAGE. Membranes were blocked in 3% milk in TBS-T (0.1% Tween®) before incubation with ab108382 and **ab8245** (Mouse anti-GAPDH antibody [6C5]) overnight at 4°C at a 1 in 1000 dilution and a 1 in 20000 dilution respectively. Blots were incubated with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preabsorbed (**ab216773**) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preabsorbed (**ab216776**) secondary antibodies at 1 in 20000 dilution for 1 hour at room temperature before imaging.



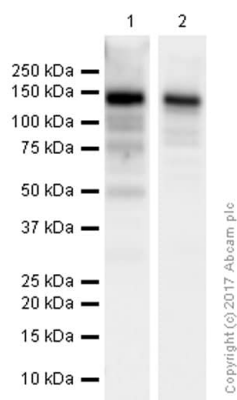
Immunocytochemistry/ Immunofluorescence - Anti-CD13 antibody [EPR4059] (ab108382)

Immunocytochemistry/ Immunofluorescence analysis of A375 (human malignant melanoma epithelial cell) cells labeling CD13 with purified ab108382 at 1:500 (0.7 µg/ml). Cells were fixed in 100% Methanol and permeabilized with None. Cells were counterstained with None. Goat anti rabbit IgG (Alexa Fluor® 488, **ab150077**) was used as the secondary antibody at 1:1000 (2 µg/ml) dilution. DAPI nuclear counterstain. PBS instead of the primary antibody was used as the secondary antibody only control.



Immunoprecipitation - Anti-CD13 antibody [EPR4059] (ab108382)

ab108382 (purified) at 1:20 dilution (2ug) immunoprecipitating in THP-1 whole cell lysate. THP-1 (Human monocytic leukemia monocyte) whole cell lysate 10ug  
Lane 2 (+): ab108382 & THP-1 whole cell lysate  
Lane 3 (-): Rabbit monoclonal IgG (**ab172730**) instead of ab108382 in THP-1 whole cell lysate  
For western blotting, VeriBlot for IP Detection Reagent (HRP) (**ab131366**) was used for detection at 1:1000 dilution.  
Blocking and diluting buffer: 5% NFDM/TBST.



Western blot - Anti-CD13 antibody [EPR4059] (ab108382)

**All lanes :** Anti-CD13 antibody [EPR4059] (ab108382) at 1/1000 dilution

**Lane 1 :** Rat lung lysates

**Lane 2 :** A375 (Human malignant melanoma epithelial cell) whole cell lysates

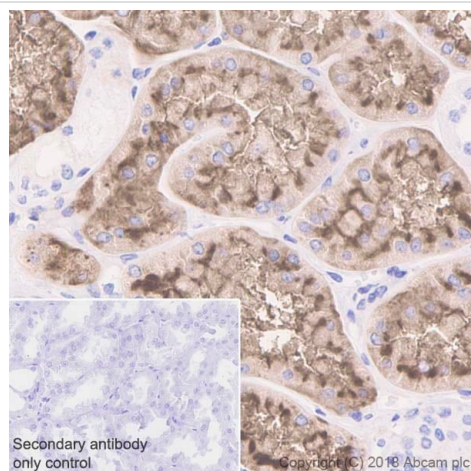
Lysates/proteins at 20 µg per lane.

### Secondary

**All lanes :** Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/20000 dilution (Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated)

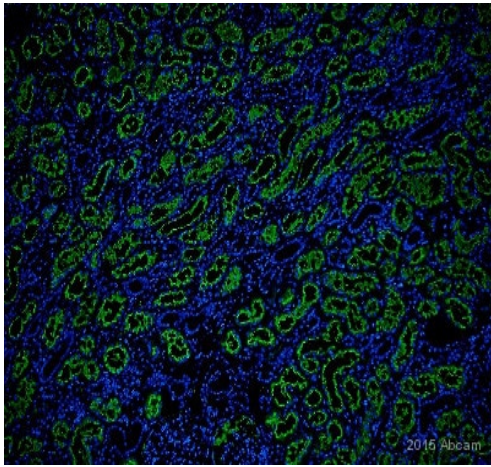
**Predicted band size:** 110 kDa

**Observed band size:** 150 kDa



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD13 antibody [EPR4059] (ab108382)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human kidney tissue sections labeling CD13 with purified ab108382 at 1:750 dilution (0.5 µg/ml). Heat mediated antigen retrieval was performed using **ab93684** (Tris/EDTA buffer, pH 9.0). Tissue was counterstained with Hematoxylin. ImmunoHistoProbe one step HRP Polymer (ready to use). PBS instead of the primary antibody was used as the negative control.

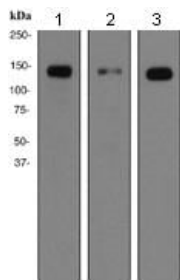


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD13 antibody

[EPR4059] (ab108382)

This image is courtesy of an anonymous abreview.

Unpurified ab108382 staining CD13 in human kidney tissue sections by Immunohistochemistry (Formaldehyde/PFA-fixed, paraffin-embedded sections). Tissue was fixed with formaldehyde, permeabilized with 0.05% tween-20 and blocked for 60 minutes at 25°C. Antigen retrieval was by heat mediation. Samples were incubated with primary antibody at a dilution of 1/400 for 1 hour at 25°C. An Alexa Flour® 488-conjugated donkey anti-rabbit IgG polyclonal (1/1200) was used as the secondary antibody.



Western blot - Anti-CD13 antibody [EPR4059] (ab108382)

**All lanes :** Anti-CD13 antibody [EPR4059] (ab108382) at 1/1000 dilution (unpurified)

**Lane 1 :** THP-1 cell lysate

**Lane 2 :** U937 cell lysate

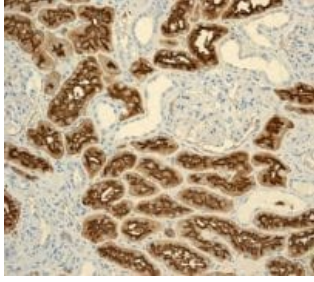
**Lane 3 :** A375 cell lysate

Lysates/proteins at 10 µg per lane.

**Predicted band size:** 110 kDa

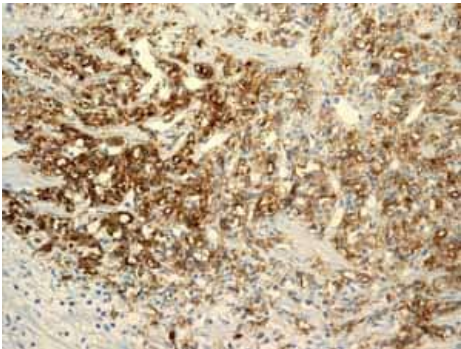
**Observed band size:** 150 kDa





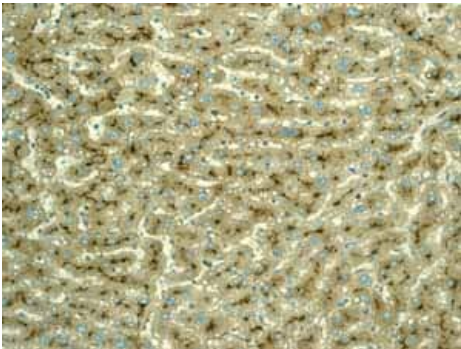
Immunohistochemical staining of paraffin-embedded Human kidney tissue using unpurified ab108382 at a dilution of 1/100.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD13 antibody [EPR4059] (ab108382)



Unpurified ab108382 showing positive staining in human Prostatic carcinoma tissue.

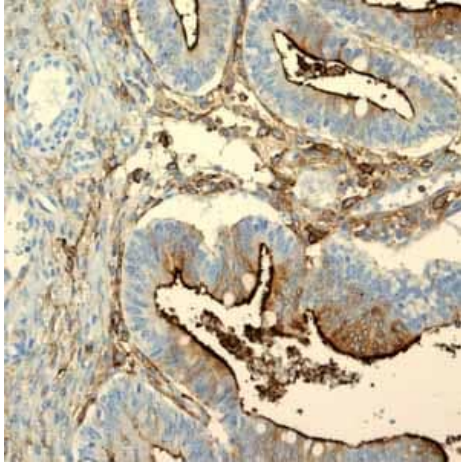
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD13 antibody [EPR4059] (ab108382)



Unpurified ab108382 showing positive staining in human Normal liver tissue.

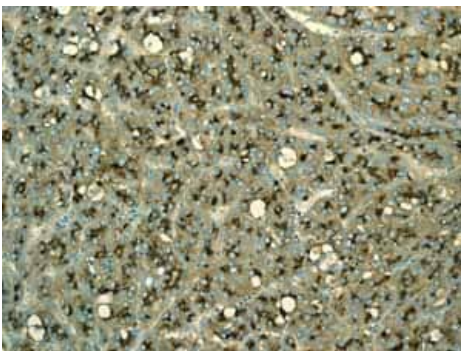
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD13 antibody [EPR4059] (ab108382)





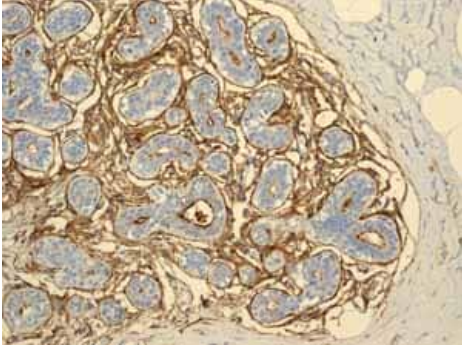
Unpurified ab108382 showing positive staining in human Ovarian carcinoma tissue.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD13 antibody  
[EPR4059] (ab108382)



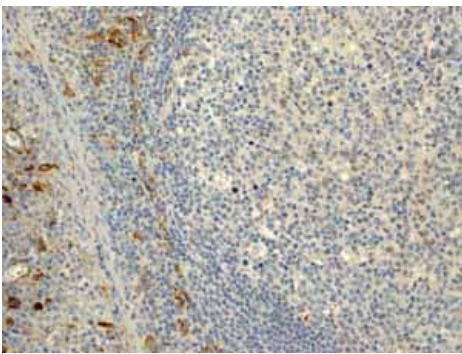
Unpurified ab108382 showing positive staining in human Hepatocellular carcinoma tissue.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD13 antibody  
[EPR4059] (ab108382)



Unpurified ab108382 showing positive staining in Normal human breast tissue.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD13 antibody [EPR4059] (ab108382)



Unpurified ab108382 showing positive staining in Normal human tonsil tissue.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD13 antibody [EPR4059] (ab108382)

### Why choose a recombinant antibody?



**Research with confidence**  
Consistent and reproducible results



**Long-term and scalable supply**  
Recombinant technology



**Success from the first experiment**  
Confirmed specificity



**Ethical standards compliant**  
Animal-free production

Anti-CD13 antibody [EPR4059] (ab108382)

**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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