abcam

Product datasheet

Anti-Carbonic anhydrase 2/CA2 antibody [EPR5195] - BSA and Azide free ab222480

敲除验证 重组 RabMAb

1 References 9 图像

概述

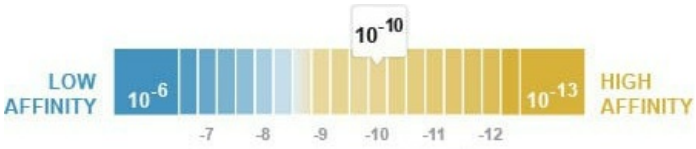
产品名称	Anti-Carbonic anhydrase 2/CA2抗体[EPR5195] - BSA and Azide free
描述	兔单克隆抗体[EPR5195] to Carbonic anhydrase 2/CA2 - BSA and Azide free
宿主	Rabbit
特异性	The mouse and rat recommendation is based on the WB results. We do not guarantee IHC-P for mouse and rat.
经测试应用	**适用于:** WB, IHC-P
种属反应性	**与反应:** Mouse, Rat, Human
免疫原	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
阳性对照	WB: HAP1, A431, HEK293, HEK293T, and Caco-2 cell lysates, and Mouse brain, Mouse heart, Rat brain, Rat spleen, Rat kidney, and Human heart tissue lysates. IHC-P: Human colon, Rat kidney, Mouse kidney, and Human clear cell carcinoma tissues.
常规说明	ab222480 is the carrier-free version of **ab124687**. 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. 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**.

性能

形式	Liquid
存放说明	Shipped at 4°C. Store at +4°C. Do Not Freeze.
解离常数 (K_D)	K_D = 5.42 x 10^{-10} M



Learn more about K_D

存储溶液	pH: 7.20 Constituent: 100% PBS
无载体	是
纯度	Protein A purified
克隆	单克隆
克隆编号	EPR5195
同种型	IgG

应用

The Abpromise guarantee **Abpromise™承诺保证使用ab222480于以下的经测试应用**

"应用说明"部分 下显示的仅为推荐的起始稀释度;实际最佳的稀释度/浓度应由使用者检定。

应用	Ab评论	说明
WB		Use at an assay dependent concentration. Detects a band of approximately 29 kDa (predicted molecular weight: 29 kDa).
IHC-P		Use at an assay dependent concentration. Perform heat mediated antigen retrieval before commencing with IHC staining protocol. The mouse and rat recommendation is based on the WB results. We do not guarantee IHC-P for mouse and rat.

靶标

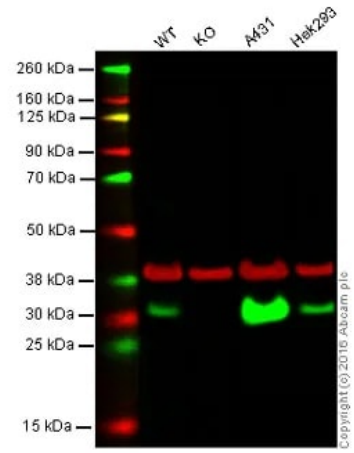
功能	Essential for bone resorption and osteoclast differentiation (By similarity). Reversible hydration of carbon dioxide. Can hydrates cyanamide to urea. Involved in the regulation of fluid secretion into the anterior chamber of the eye.
疾病相关	Defects in CA2 are the cause of osteopetrosis autosomal recessive type 3 (OPTB3) [MIM:259730]; also known as osteopetrosis with renal tubular acidosis, carbonic anhydrase II

deficiency syndrome, Guibaud-Vainsel syndrome or marble brain disease. Osteopetrosis is a rare genetic disease characterized by abnormally dense bone, due to defective resorption of immature bone. The disorder occurs in two forms: a severe autosomal recessive form occurring in utero, infancy, or childhood, and a benign autosomal dominant form occurring in adolescence or adulthood. Autosomal recessive osteopetrosis is usually associated with normal or elevated amount of non-functional osteoclasts. OPTB3 is associated with renal tubular acidosis, cerebral calcification (marble brain disease) and in some cases with mental retardation.

序列相似性 Belongs to the alpha-carbonic anhydrase family.

细胞定位 Cytoplasm.

图片

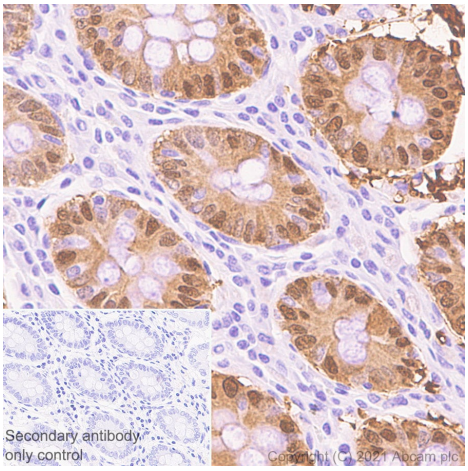


Western blot - Anti-Carbonic anhydrase 2/CA2 antibody [EPR5195] - BSA and Azide free (ab222480)

This data was developed using **ab124687**, the same antibody clone in a different buffer formulation.

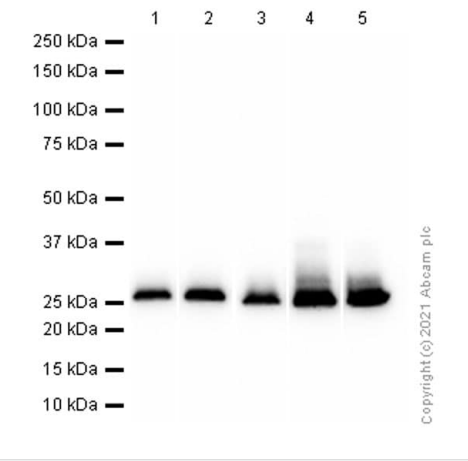
Lane 1: Wild-type HAP1 cell lysate (40 µg)
Lane 2: Carbonic anhydrase 2/CA2 knockout HAP1 cell lysate (40 µg)
Lane 3: A431 cell lysate (40 µg)
Lane 4: HEK293 cell lysate (40 µg)
Lanes 1 - 4: Merged signal (red and green). Green - **ab124687** observed at 32 kDa. Red - loading control, **ab8245**, observed at 37 kDa.

ab124687 was shown to specifically react with Carbonic anhydrase 2/CA2 when Carbonic anhydrase 2/CA2 knockout samples were used. Wild-type and Carbonic anhydrase 2/CA2 knockout samples were subjected to SDS-PAGE. Ab124687 and **ab8245** (loading control to GAPDH) were diluted at 1/1000 and 1:10,000 dilution respectively and incubated overnight at 4C. Blots were developed with IRDye® 800CW Goat anti-Rabbit IgG (H + L) and IRDye® 680 Goat anti-Mouse IgG (H + L) secondary antibodies at 1:10,000 dilution for 1 hour at room temperature before imaging.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Carbonic anhydrase 2/CA2 antibody [EPR5195] - BSA and Azide free (ab222480)

This data was developed using **ab124687**, the same antibody clone in a different buffer formulation.
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human colon tissue sections labeling Carbonic anhydrase 2/CA2 with purified **ab124687** at 1/1600 (0.063 µg/ml). Heat mediated antigen retrieval was performed using Bond™ Epitope Retrieval Solution 2 (pH 9.0). Tissue was counterstained with Hematoxylin. Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**) was used at 1/0 dilution. PBS instead of the primary antibody was used as the negative control. The immunostaining was performed on a Leica Biosystems BOND® RX instrument.



Western blot - Anti-Carbonic anhydrase 2/CA2 antibody [EPR5195] - BSA and Azide free (ab222480)

All lanes : Anti-Carbonic anhydrase 2/CA2 antibody [EPR5195] (**ab124687**) at 1/5000 dilution (Purified)

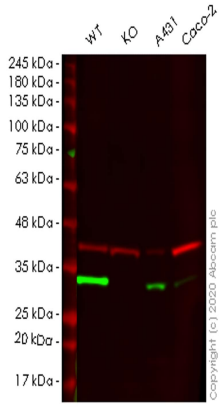
Lane 1 : Mouse brain lysate
Lane 2 : Mouse heart lysate
Lane 3 : Rat brain lysate
Lane 4 : Rat spleen lysate
Lane 5 : Rat kidney lysate

Lysates/proteins at 20 µg per lane.

Secondary
All lanes : Goat Anti-Rabbit IgG (HRP) with minimal cross-reactivity with human IgG at 1/2000 dilution

Predicted band size: 29 kDa
Observed band size: 29 kDa

This data was developed using **ab124687**, the same antibody clone in a different buffer formulation.



Western blot - Anti-Carbonic anhydrase 2/CA2 antibody [EPR5195] - BSA and Azide free (ab222480)

All lanes : Anti-Carbonic anhydrase 2/CA2 antibody [EPR5195] (**ab124687**) at 1/1000 dilution

Lane 1 : Wild-type HEK293T cell lysate
Lane 2 : CA2 knockout HEK293T cell lysate
Lane 3 : A431 cell lysate
Lane 4 : Caco-2 cell lysate

Lysates/proteins at 20 µg per lane.

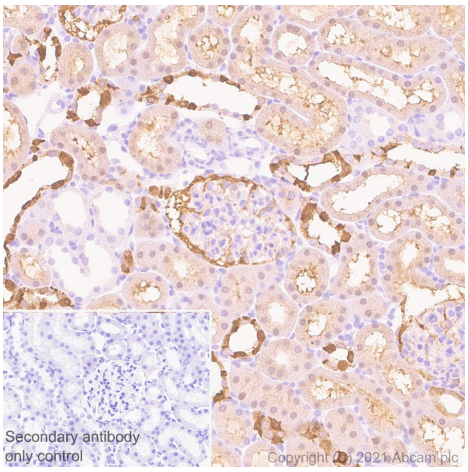
Secondary
All lanes : Goat anti-Rabbit IgG H&L (IRDye® 800CW) preadsorbed (**ab216773**) at 1/10000 dilution

Predicted band size: 29 kDa
Observed band size: 29 kDa

This data was developed using the same antibody clone in a different buffer formulation (**ab124687**).

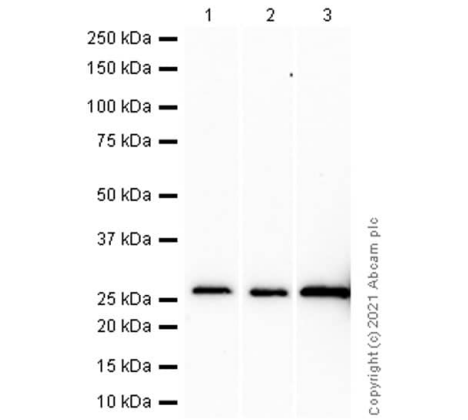
Lanes 1-4: Merged signal (red and green). Green - **ab124687** observed at 29 kDa. Red - loading control **ab8245** observed at 36 kDa.

ab124687 Anti-Carbonic anhydrase 2/CA2 antibody [EPR5195] was shown to specifically react with Carbonic anhydrase 2/CA2 in wild-type HEK293T cells. Loss of signal was observed when knockout cell line **ab265072** (knockout cell lysate **ab257084**) was used. Wild-type and Carbonic anhydrase 2/CA2 knockout samples were subjected to SDS-PAGE. **ab124687** and Anti-GAPDH antibody [6C5] - Loading Control (**ab8245**) were incubated at room temperature for 2. 5 hours at 1 in 1000 dilution and 1 in 20000 dilution respectively. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preadsorbed (**ab216773**) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preadsorbed (**ab216776**) secondary antibodies at 1 in 20000 dilution for 1 hour at room temperature before imaging.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Carbonic anhydrase 2/CA2 antibody [EPR5195] - BSA and Azide free (ab222480)

This data was developed using **ab124687**, the same antibody clone in a different buffer formulation.
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of rat kidney tissue sections labeling Carbonic anhydrase 2/CA2 with purified **ab124687** at 1/1600 (0.063 µg/ml). Heat mediated antigen retrieval was performed using Bond™ Epitope Retrieval Solution 2 (pH 9.0). Tissue was counterstained with Hematoxylin. Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**) was used at 1/0 dilution. PBS instead of the primary antibody was used as the negative control. The immunostaining was performed on a Leica Biosystems BOND® RX instrument.



Western blot - Anti-Carbonic anhydrase 2/CA2 antibody [EPR5195] - BSA and Azide free (ab222480)

All lanes : Anti-Carbonic anhydrase 2/CA2 antibody [EPR5195] (**ab124687**) at 1/5000 dilution (Purified)

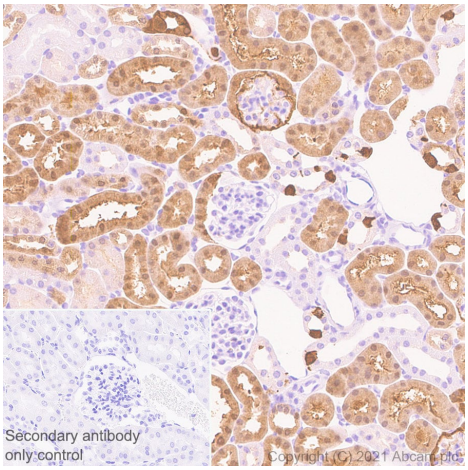
Lane 1 : HEK-293 (Human embryonic kidney epithelial cell) whole cell lysate
Lane 2 : Caco-2 (Human colorectal adenocarcinoma epithelial cell) whole cell lysate
Lane 3 : Human heart lysate

Lysates/proteins at 20 µg per lane.

Secondary
All lanes : Goat Anti-Rabbit IgG (HRP) with minimal cross-reactivity with human IgG at 1/2000 dilution

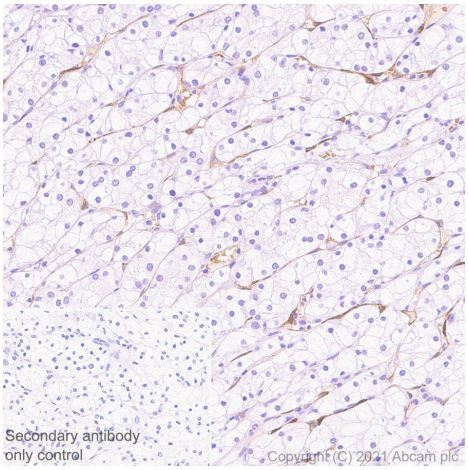
Predicted band size: 29 kDa
Observed band size: 29 kDa

This data was developed using **ab124687**, the same antibody clone in a different buffer formulation.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Carbonic anhydrase 2/CA2 antibody [EPR5195] - BSA and Azide free (ab222480)

This data was developed using **ab124687**, the same antibody clone in a different buffer formulation. Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of mouse kidney tissue sections labeling Carbonic anhydrase 2/CA2 with purified **ab124687** at 1/1600 (0.063 µg/ml). Heat mediated antigen retrieval was performed using Bond™ Epitope Retrieval Solution 2 (pH 9.0). Tissue was counterstained with Hematoxylin. Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**) was used at 1/0 dilution. PBS instead of the primary antibody was used as the negative control. The immunostaining was performed on a Leica Biosystems BOND® RX instrument.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Carbonic anhydrase 2/CA2 antibody [EPR5195] - BSA and Azide free (ab222480)

This data was developed using **ab124687**, the same antibody clone in a different buffer formulation. Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human clear cell carcinoma tissue sections labeling Carbonic anhydrase 2/CA2 with purified **ab124687** at 1/1600 (0.063 µg/ml). Heat mediated antigen retrieval was performed using Bond™ Epitope Retrieval Solution 2 (pH 9.0). Tissue was counterstained with Hematoxylin. Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**) was used at 1/0 dilution. PBS instead of the primary antibody was used as the negative control. The immunostaining was performed on a Leica Biosystems BOND® RX instrument.

Anti-Carbonic anhydrase 2/CA2 antibody [EPR5195]

- BSA and Azide free (ab222480)

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