

## Datasheet: AHP206

<b>Description:</b>	SHEEP ANTI HUMAN CARBONIC ANHYDRASE II
<b>Specificity:</b>	CARBONIC ANHYDRASE II
<b>Other names:</b>	CA2
<b>Format:</b>	Purified
<b>Product Type:</b>	Polyclonal Antibody
<b>Isotype:</b>	Polyclonal IgG
<b>Quantity:</b>	1 ml

## Product Details

### Applications

This product has been reported to work in the following applications. This information is derived from testing within our laboratories, peer-reviewed publications or personal communications from the originators. Please refer to references indicated for further information. For general protocol recommendations, please visit [www.bio-rad-antibodies.com/protocols](http://www.bio-rad-antibodies.com/protocols).

	Yes	No	Not Determined	Suggested Dilution
Flow Cytometry			▪	
Immunohistology - Frozen			▪	
Immunohistology - Paraffin			▪	
ELISA			▪	
Immunoprecipitation			▪	
Western Blotting	▪			1/1000
Immunodiffusion	▪			
Immunofluorescence	▪			

Where this antibody has not been tested for use in a particular technique this does not necessarily exclude its use in such procedures. Suggested working dilutions are given as a guide only. It is recommended that the user titrates the antibody for use in their own system using appropriate negative/positive controls

<b>Target Species</b>	Human
<b>Product Form</b>	Purified IgG - liquid
<b>Antiserum Preparation</b>	Antisera to human carbonic anhydrase II were raised by repeated immunisation of sheep with highly purified antigen. Purified IgG was prepared from whole serum by ion exchange chromatography.
<b>Buffer Solution</b>	Glycine buffered saline
<b>Preservative Stabilisers</b>	<0.1% Sodium Azide (NaN <sub>3</sub> ) 0.1% EACA

0.01% Benzamidine  
1 mM EDTA

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**Immunogen** Purified human carbonic anhydrase II (CAII) prepared from erythrocytes.

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**External Database Links**

**UniProt:**

[P00918](#)    [Related reagents](#)

**Entrez Gene:**

[760](#) CA2    [Related reagents](#)

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**RRID** AB\_321215

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**Specificity**

**Sheep anti Human carbonic anhydrase II antibody** recognizes human carbonic anhydrase II, also known as Carbonate dehydratase II or Carbonic anhydrase C. Carbonic anhydrase II is a 259 amino acid ~30 kDa enzyme essential for bone resorption and osteoclast differentiation.

Mutations in the CA2 gene has been identified as the cause of osteopetrosis, autosomal recessive 3 ([OPTB3](#)), a rare disease characterized by particularly dense bone, cerebral calcification and renal tubular acidosis ([Shah et al 2004](#)).

Product identity is confirmed by double diffusion vs human CAII. No reactivity is seen in immunodiffusion against CAI.

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**Western Blotting**

Sheep anti human carbonic anyhdrase II recognises a band of ~18kDa in rat adrenomedullary chromaffin cell lysates, see [Salman et al.](#) for details.

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**References**

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7. Salman, S. *et al.* (2013) Chronic exposure of neonatal rat adrenomedullary chromaffin cells to opioids in vitro blunts both hypoxia and hypercapnia chemosensitivity. [J Physiol. 591 \(Pt 2\): 515-29.](#)
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10. Sterling, D. *et al.* (2002) The functional and physical relationship between the DRA bicarbonate transporter and carbonic anhydrase II. [Am J Physiol Cell Physiol. 283 \(5\): C1522-9.](#)
11. Alvarez, L. *et al.* (2001) Carbonic anhydrase II associated with plasma membrane in a human pancreatic duct cell line (CAPAN-1). [J Histochem Cytochem. 49 \(8\): 1045-53.](#)
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13. Sterling, D. *et al.* (2002) The extracellular component of a transport metabolon. Extracellular loop 4 of the human AE1 Cl-/HCO<sub>3</sub>- exchanger binds carbonic anhydrase IV. [J Biol Chem. 277 \(28\): 25239-46.](#)
14. Long, K.L.P. *et al.* (2021) Regional gray matter oligodendrocyte- and myelin-related measures are associated with differential susceptibility to stress-induced behavior in rats and humans. [Transl Psychiatry. 11 \(1\): 631.](#)

**Storage** This product is shipped at ambient temperature. It is recommended to aliquot and store at -20°C on receipt. When thawed, aliquot the sample as needed. Keep aliquots at 2-8°C for short term use (up to 4 weeks) and store the remaining aliquots at -20°C.

Avoid repeated freezing and thawing as this may denature the antibody. Storage in frost-free freezers is not recommended.

**Guarantee** 12 months from date of despatch

**Health And Safety Information** Material Safety Datasheet documentation #10087 available at: <https://www.bio-rad-antibodies.com/SDS/AHP206>  
10087

**Regulatory** For research purposes only

## Related Products

### Recommended Secondary Antibodies

Rabbit Anti Sheep IgG (H/L) (5184-2304...) [Biotin](#)

Donkey Anti Sheep IgG (STAR88...) [DyLight®488](#), [HRP](#)

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To find a batch/lot specific datasheet for this product, please use our online search tool at: [bio-rad-antibodies.com/datasheets](https://www.bio-rad-antibodies.com/datasheets)

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