abcam

Product datasheet

Recombinant *E. coli* Carbonic anhydrase 2/CA2 protein ab208309

1 Image

Description

Product name	Recombinant *E. coli* Carbonic anhydrase 2/CA2 protein
Biological activity	Specific activity is > 1,000 pmol/min/ug, and is defined as the amount of enzyme that hydrolyze 1.0 pmole of 4-nitrophenyl acetate to 4-nitrophenol per minute at pH 7.5 at 37C.
Purity	> 95 % SDS-PAGE. ab208309 was purified by conventional chromatography techniques.
Expression system	Escherichia coli
Accession	P61517
Protein length	Full length protein
Animal free	No
Nature	Recombinant
Species	Escherichia coli
Sequence	MGSSHHHHHHSSGLVPRGSHMKDIDTLISNNALWSKM LVEEDPGFFEKLA QAQKPRFLWIGCSDSRVPAERLTGLEPGELFVHRNVA NLVIHTDLNCLSV VQYAVDVLEVEHIIICGHYGCGGVQAAVENPELGLINN WLLHIRDIWFKH SSLLGEMPQERRLDTLCELNVMEQVYNLGHSTIMQSA WKRGQKVTIHGWA YGIHDGLLRDLDVTATNRETLEQRYRHGISNLKLKHANH K
Predicted molecular weight	27 kDa including tags
Amino acids	1 to 220
Tags	His tag N-Terminus
Additional sequence information	NP_414668

Specifications

Our Abpromise guarantee covers the use of **ab208309** in the following tested applications.

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

Applications	SDS-PAGE Functional Studies Mass Spectrometry
Mass spectrometry	MALDI-TOF
Form	Liquid

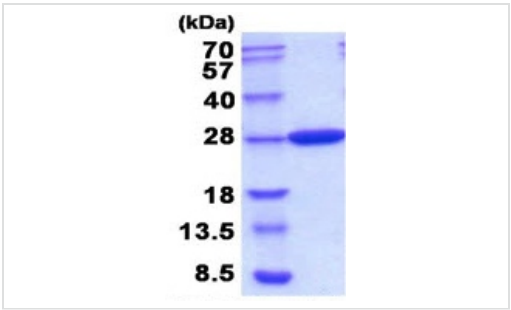
Preparation and Storage

Stability and Storage	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. pH: 8 Constituents: 0.32% Tris HCl, 10% Glycerol, 0.02% DTT This product is an active protein and may elicit a biological response in vivo, handle with caution.

General Info

Function	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.
Involvement in disease	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.
Sequence similarities	Belongs to the alpha-carbonic anhydrase family.
Cellular localization	Cytoplasm.

Images



SDS-PAGE - Recombinant *E. coli* Carbonic anhydrase 2/CA2 protein (ab208309)

15% SDS-PAGE analysis of 3 µg ab208309.

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

Our Abpromise to you: Quality guaranteed and expert technical support

- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery
- Response to your inquiry within 24 hours
- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit https://www.abcam.com/abpromise or contact our technical team.

Terms and conditions

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors