abcam

Product datasheet

Recombinant Human Carbonic anhydrase 2/CA2 protein (His tag) ab167716

1 Image

Description

Product name	Recombinant Human Carbonic anhydrase 2/CA2 protein (His tag)
Purity	> 95 % SDS-PAGE. Purified by Immobilized metal affinity chromatography.
Endotoxin level	< 1.000 Eu/µg
Expression system	HEK 293 cells
Accession	**P00918**
Protein length	Full length protein
Animal free	No
Nature	Recombinant
Species	Human
Sequence	MSHHWGYGKHNGPEHWHKDFPIAKGERQSPVDIDTHTAK YDPSLKPLSVS YDQATSLRILNNGHAFNVEFDDSQDKAVLKGGPLDGTYRL IQFHFHWGSL DGQGSEHTVDKKKYAAELHLVHWNTKYGDFGKAVQQPD GLAVLGIFLKVG SAKPGLQKVVDVLDSIKTKGKSADFTNFDPRGLLPESLDY WTYPGSLTTP PLLECVTWIVLKEPISVSSEQVLKFRKLNFNGEGEPEELM VDNWRPAQPL KNRQIKASFK
Predicted molecular weight	30 kDa including tags
Amino acids	1 to 260
Tags	His tag C-Terminus

Specifications

Our **Abpromise guarantee** covers the use of **ab167716** 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
Form	Lyophilized

Preparation and Storage

Stability and Storage

Shipped at 4°C. Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle.

pH: 7.4
Constituents: 0.24% Tris, 0.88% Sodium chloride

Normally Mannitol or Trehalose are added as protectants before lyophilization.

Reconstitution

It is recommended to reconstitute the lyophilized protein in 500µl sterile deionized water to a final concentration of 0.200 mg/ml. Solubilize for 30 to 60 minutes at room temperature with occasional gentle mixing. Carrier protein (0.1% HSA or BSA) is strongly recommended for further dilution and long term storage.

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.

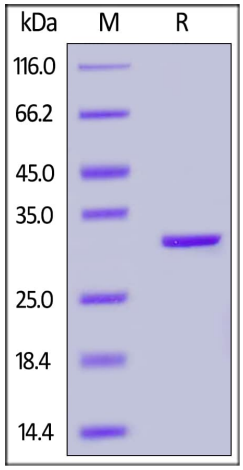
Sequence similarities

Belongs to the alpha-carbonic anhydrase family.

Cellular localization

Cytoplasm.

Images



SDS-PAGE - Recombinant human Carbonic anhydrase 2/CA2 protein (ab167716)

SDS-PAGE of reduced ab167716 stained overnight with Coomassie Blue. The protein migrates as 31-33 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.

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

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