

Human Carbonic Anhydrase X / CA10 Protein

Catalog Number: 10687-HCCH



Sino Biological Inc.
Biological Solution Specialist

General Information

Gene Name Synonym:

CA-RPX; CA10; CARPX; HUCEP-15; 2700029L05Rik; BB085816; Ca10; Car10; RP23-448I9.1

Protein Construction:

The mature form of human CARPX (NP_001076002.1) (Met 1-Asn 300) with five amino acids (DDDDK) at the C-terminus was expressed and purified.

Source: Human

Expression Host: Human Cells

QC Testing

Purity: > 95 % as determined by SDS-PAGE

Bio Activity:

Measured by its esterase activity. The specific activity is >100 pmoles/min/μg, as measured with 1 mM 4-Nitrophenyl acetate and 1 μg enzyme at 400 nm in 100 μL of 12.5 mM Tris, 75 mM NaCl, pH 7.5.

Endotoxin:

< 1.0 EU per μg of the protein as determined by the LAL method

Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

Predicted N terminal: Gln 22

Molecular Mass:

The recombinant human CARPX consists of 285 amino acids and has a predicted molecular mass of 27.2 kDa. Due to glycosylation, the rhCARPX migrates as an approximately 38 kDa band in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile 100mM Glycine, 10mM NaCl, 50mM Tris, pH 7.5

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

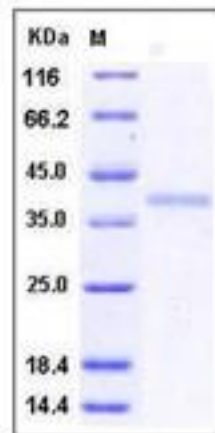
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

Carbonic anhydrase X, also called carbonic anhydrase - related protein X (CARPX) and CA10, belongs to the CA family of zinc metalloenzymes which catalyze the reversible hydration of carbon dioxide in various biological processes such as respiration, renal tubular acidification and bone resorption. The secreted protein CARPX without CA activity (hydration of CO₂) is identified as an acatalytic member of the alpha-carbonic anhydrase subgroup. CARP X expression is detected in the adult total brain and almost all parts of the central nervous system, but not in the fetal brain. Accordingly, CARP X is suggested to play a role in the development of central nervous system, especially the brain. The same CARP X protein are encoded by multiple transcript variants of this gene.

References

- 1.Okamoto, N. et al., 2001, Biochim. Biophys. Acta 1518:311-316.
- 2.Taniuchi, K. et al., Neuroscience 112: 93-99.
- 3.Supuran, C.T. et al., 2003, Med. Res. Rev. 23: 146-189.

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