

Carbonic Anhydrase 12 Protein, Cynomolgus, Recombinant (His)

General Information

Synonyms:	CA12;CAXII;Carbonic anhydrase;CA-XII;Tumor antigen HOM-RCC-3.1.3;Carbonic anhydrase 12
Protein Construction:	Ala25-Gly299
Species:	Cynomolgus
Expression Host:	HEK293 Cells
Accession:	A0A2K5TSB2
Molecular Weight:	32.04 kDa (predicted). Due to glycosylation, the protein migrates to 40-50 kDa based on Tris-Bis PAGE result.

QC Testing

Biological Activity:	Activity has not been tested. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 95% as determined by Tris-Bis PAGE; > 95% as determined by HPLC
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS (pH 7.4). Typically, 8% trehalose is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

Reconstitute the lyophilized protein in distilled water. The product concentration should not be less than 100 μg/ml. Before opening, centrifuge the tube to collect powder at the bottom. After adding the reconstitution buffer, avoid vortexing or pipetting for mixing.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

Carbonic anhydrases (CAs) are a family of enzymes involved in the pH regulation of metabolically active cells/tissues. Carbonic anhydrase XII (CA XII) is a key mediator of several signaling pathways that are involved in cancer development.

Reference

Williams KJ, Gieling RG. Preclinical Evaluation of Ureidosulfamate Carbonic Anhydrase IX/XII Inhibitors in the Treatment of Cancers. *Int J Mol Sci.* 2019 Dec 2;20(23):6080. doi: 10.3390/ijms20236080. PMID: 31810330; PMCID: PMC6928609.

Gu XF, et al. Prognostic value of carbonic anhydrase XII (CA XII) overexpression in hepatocellular carcinoma. *Int J Clin Exp Pathol.* 2019 Jun 1;12(6):2173-2183. PMID: 31934040; PMCID: PMC6949632.

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Tel:781-999-4286 E_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481