

32-6687: CA12 Human

Application : Functional Assay

Alternative Name : Carbonic anhydrase 12, Carbonate dehydratase XII, Carbonic anhydrase XII, CA-XII, Tumor antigen HOM-RCC-3.1.3, CA12, Carbonic Anhydrase XII, Carbonic anhydrase 12 isoform 1, CAXII, HsT18816.

Description

Source: Sf9, Baculovirus cells.

Sterile Filtered clear solution.

Carbonic anhydrase 12 (CA12) is an enzyme that belongs to the Carbonic anhydrases (CAs) family. This is a large family of zinc metalloenzymes which catalyze the reversible hydration of carbon dioxide. They are involved in various biological processes, including respiration, calcification, acid-base balance, bone resorption, and the formation of aqueous humor, cerebrospinal fluid, saliva, and gastric acid. CA12 is a type I membrane protein which is highly expressed in normal tissues, such as the kidney, colon and pancreas, and is overexpressed in 10% of clear cell renal carcinomas.

CA12 Human Recombinant produced in Sf9 Baculovirus cells is a single, glycosylated polypeptide chain containing 283 amino acids (25-301a.a.) and having a molecular mass of 31.94kDa (Migrates at 28-40kDa on SDS-PAGE under reducing conditions). CA12 is fused to a 6 amino acid His-tag at C-terminus & purified by proprietary chromatographic techniques.

Product Info

Amount : 2 µg / 10 µg

Purification : Greater than 90.0% as determined by SDS-PAGE.

Content : CA12 protein solution (0.5mg/ml) containing Phosphate Buffer Saline (pH7.4) and 10% glycerol.

Storage condition : Store at 4°C if entire vial will be used within 2-4 weeks. Store, frozen at -20°C for longer periods of time. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Avoid multiple freeze-thaw cycles.

Amino Acid : APVNGSKWTY FGPDGENSWS KKYPSCGGLL QSPIDLHSDI LQYDASLTPL EFQGYNLSAN KQFLLTNGH SVKLNLPSDM HIQGLQSRYS ATQLHLHWGN PNDPHGSEHT VSGQHFAEL HIVHYNLDLY PDASTASNKS EGLAVLAVLI EMGSFNPSYD KIFSHLQHVK YKGQEA FVPG FNIEELLPER TAEYYRYRGS LTTPPCNPTV LWTVFRNPVQ ISQEQLLALE TALYCTHMDD PSPREMINNF RQVQKFDERL VYTSFSQVQV CTAAGLSHHH HHH.

Application Note

Specific activity is > 300 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.