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CA I (m2): 293T Lysate: sc-118939

BACKGROUND

Carbonic anhydrases (CAs), also designated carbonate dehydratases or carbonate hydrolyases, form a large family of genes that encode zinc metalloenzymes of great physiologic importance. As catalysts of the reversible hydration of carbon dioxide, these enzymes participate in a variety of biologic processes, including respiration, acid-base balance, bone resorption and calcification as well as the formation of aqueous humor, cerebrospinal fluid, saliva and gastric acid. Genes in the α -carbonic anhydrase family encode either active carbonic anhydrase isozymes or "acatalytic" (devoid of CO_2 hydration activity) carbonic anhydrase-related proteins. Human CA I (CA1) is encoded by the CA1 gene, which maps to a region on chromosome 8q21.2 that harbors a cluster of CA genes. CA I localizes to the cytoplasm and research indicates that a severe deficiency of CA I does not result in any obvious hematological or renal consequences.

REFERENCES

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4. Hewett-Emmett, D. and Tashian, R.E. 1996. Functional diversity, conservation, and convergence in the evolution of the α -, β -, and γ -carbonic anhydrase gene families. *Mol. Phylogenet. Evol.* 5: 50-77.
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7. Supuran, C.T., et al. 2000. Carbonic anhydrase inhibitors: synthesis of sulphonamides incorporating 2,4,6-trisubstituted-pyridinium-ethylcarboxamido moieties possessing membrane-impermeability and *in vivo* selectivity for the membrane-bound (CA IV) versus the cytosolic (CA I and CA II) isozymes. *J. Enzym. Inhib.* 15: 381-401.
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CHROMOSOMAL LOCATION

Genetic locus: Car1 (mouse) mapping to 3 A1.

PRODUCT

CA I (m2): 293T Lysate represents a lysate of mouse CA I transfected 293T cells and is provided as 100 μg protein in 200 μl SDS-PAGE buffer.

APPLICATIONS

CA I (m2): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive CA I antibodies. Recommended use: 10-20 μl per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.