

CA IV (m): 293T Lysate: sc-125085

BACKGROUND

Carbonic anhydrase IV (CA IV) is glycosylphosphatidylinositol-anchored to the outer surface of the plasma membrane where it catalyzes hydration-dehydration of $\text{CO}_2/\text{HCO}_3^-$. CA IV is present on the plasma face of microcapillaries and in the choriocapillaris of the human eye. CA IV facilitates renal acidification in the kidney and is responsible for the regulation of interstitial pH (pH_i) transients in brain. Impairment in targeting leads to disruption of HCO_3^- secretion and associates with malfunction in cystic fibrosis cells. Carbonic anhydrases are zinc metalloenzymes that catalyze the reversible hydration of carbon dioxide. They participate in respiration, calcification, acid-base balance, bone resorption, and the formation of aqueous humor, cerebrospinal fluid, saliva, and gastric acid. Carbonic anhydrases show extensive diversity in tissue distribution and in their subcellular localization.

REFERENCES

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4. Sterling, D., et al. 2002. The extracellular component of a transport metabolon. Extracellular loop 4 of the human $\text{AE}_1 \text{ Cl}^-/\text{HCO}_3^-$ exchanger binds carbonic anhydrase IV. *J. Biol. Chem.* 277: 25239-25246.
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CHROMOSOMAL LOCATION

Genetic locus: Car4 (mouse) mapping to 11 C.

PRODUCT

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

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.

APPLICATIONS

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

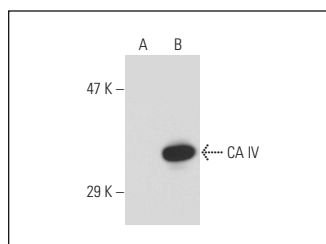
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

CA IV (G-11): sc-74527 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse CA IV expression in CA IV transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker[™] Molecular Weight Standards: sc-2035, UltraCruz[®] Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

DATA



CA IV (G-11): sc-74527. Western blot analysis of CA IV expression in non-transfected: sc-117752 (A) and mouse CA IV transfected: sc-125085 (B) 293T whole cell lysates.

PROTOCOLS

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