SANTA CRUZ BIOTECHNOLOGY, INC.

CA VI (H-8): sc-514761

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Carbonic anhydrase VI (CA VI) contributes to taste function when secreted in the saliva by protecting taste receptor cells (TRCs) from apoptosis. Functional CA VI exists as a single polypeptide chain tightly bound to one molecule of zinc, and containing two N-linked glycosylation sites. Decreased CA VI secretion correlates with loss of taste (hypogeusia) and smell (hyposmia) or distorted taste (dysgeusia) and smell (dysosmia), and altered taste bud morphology. Addition of zinc to individuals experiencing these symptoms restored secretion of CA VI to normal levels and normal taste bud morphology in some, but not all, cases, indicating two different mechanisms leading to CA VI dysfunction.

REFERENCES

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2. Fernley, R.T., et al. 1991. Radioimmunoassay of carbonic anhydrase VI in saliva and sheep tissues. Biochem. J. 274: 313-316.
3. Ogawa, Y., et al. 1993. Immunoelectron microscopy of carbonic anhydrase isozyme VI in human submandibular gland: comparison with isozymes I and II. J. Histochem. Cytochem. 41: 343-351.
4. Parkkila, S., et al. 1993. Competitive time-resolved immunofluorometric assay for quantifying carbonic anhydrase VI in saliva. Clin. Chem. 39: 2154-2157.
5. Parkkila, S., et al. 1995. Circadian periodicity in salivary carbonic anhydrase VI concentration. Acta Physiol. Scand. 154: 205-211.
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7. Thatcher, B.J., et al. 1998. Gustin from human parotid saliva is carbonic anhydrase VI. Biochem. Biophys. Res. Commun. 250: 635-641.
8. Henkin, R.I., et al. 1999. Efficacy of exogenous oral zinc in treatment of patients with carbonic anhydrase VI deficiency. Am. J. Med. Sci. 318: 392-405.
9. Leinonen, J., et al. 2001. Secretion of carbonic anhydrase isoenzyme VI (CA VI) from human and rat lingual serous von Ebner's glands. J. Histochem. Cytochem. 49: 657-662.

CHROMOSOMAL LOCATION

Genetic locus: Car6 (mouse) mapping to 4 E2.

SOURCE

CA VI (H-8) is a mouse monoclonal antibody raised against amino acids 291-335 mapping near the C-terminus of carbonic anhydrase VI of rat origin.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PRODUCT

Each vial contains 200 µg IgG_{2b} in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CA VI (H-8) is available conjugated to agarose (sc-514761 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-514761 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514761 PE), fluorescein (sc-514761 FITC), Alexa Fluor® 488 (sc-514761 AF488), Alexa Fluor® 546 (sc-514761 AF546), Alexa Fluor® 594 (sc-514761 AF594) or Alexa Fluor® 647 (sc-514761 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-514761 AF680) or Alexa Fluor® 790 (sc-514761 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

CA VI (H-8) is recommended for detection of CA VI of mouse and rat origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

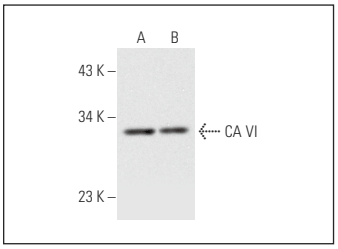
Suitable for use as control antibody for CA VI siRNA (m): sc-77335, CA VI shRNA Plasmid (m): sc-77335-SH and CA VI shRNA (m) Lentiviral Particles: sc-77335-V.

Molecular Weight of deglycosylated CA VI: 33 kDa.

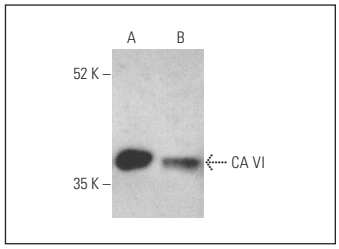
Molecular Weight of glycosylated CA VI: 37 kDa.

Positive Controls: c4 whole cell lysate: sc-364186 or RAT2 whole cell lysate: sc-364198.

DATA



CA VI (H-8): sc-514761. Western blot analysis of CA VI expression in c4 (**A**) and RAT2 (**B**) whole cell lysates.



CA VI (H-8) HRP: sc-514761 HRP. Direct western blot analysis of CA VI expression in RAT2 (**A**) and c4 (**B**) whole cell lysates.

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.