SANTA CRUZ BIOTECHNOLOGY, INC.

CA VI (M-40): sc-99172

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 Pt. 2: 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.
6. Kivelä, J., et al. 1997. Secretory carbonic anhydrase isoenzyme (CA VI) in human serum. Clin. Chem. 43: 2318-2322.
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 (M-40) is a rabbit polyclonal antibody raised against amino acids 256-295 mapping near the C-terminus of carbonic anhydrase VI of mouse origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

CA VI (M-40) is recommended for detection of precursor and mature carbonic anhydrase VI of mouse origin by Western Blotting (starting dilution 1:200, 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.

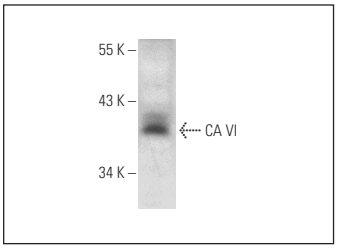
Molecular Weight of CA VI: 33/37 kDa.

Positive Controls: c4 whole cell lysate: sc-364186.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



CA VI (M-40): sc-99172. Western blot analysis of CA VI expression in c4 whole cell lysate.

STORAGE

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

RESEARCH USE

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