SANTA CRUZ BIOTECHNOLOGY, INC.

CA VI (N-17): sc-27889

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 has been shown to restore 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., Wright, R.D. and Coghlan, J.P. 1991. Radioimmunoassay of carbonic anhydrase VI in saliva and sheep tissues. Biochem. J. 274 (Pt 2): 313-316.
3. Ogawa, Y., Hong, S.S., Toyosawa, S., Kuwahara, H., Shimazaki, M. and Yagi, T. 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., Parkkila, A.K., Vierjoki, T., Stahlberg, T. and Rajaniemi, H. 1993. Competitive time-resolved immunofluorometric assay for quantifying carbonic anhydrase VI in saliva. Clin. Chem. 39: 2154-2157.
5. Parkkila, S., Parkkila, A.K. and Rajaniemi, H. 1995. Circadian periodicity in salivary carbonic anhydrase VI concentration. Acta Physiol. Scand. 154: 205-211.

CHROMOSOMAL LOCATION

Genetic locus: CA6 (human) mapping to 1p36.2.

SOURCE

CA VI (N-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of carbonic anhydrase VI of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-27889 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

CA VI (N-17) is recommended for detection of precursor and mature CA VI of human 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 (h): sc-77334, CA VI shRNA Plasmid (h): sc-77334-SH and CA VI shRNA (h) Lentiviral Particles: sc-77334-V.

Molecular Weight of glycosylated CA VI: 37 kDa.

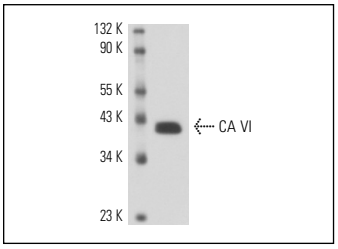
Molecular Weight of deglycosylated CA VI: 33 kDa.

Positive Controls: human salivary gland tissue extract.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



CA VI (N-17): sc-27889. Western blot analysis of CA VI expression in human salivary gland tissue extract.

RESEARCH USE

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