SANTA CRUZ BIOTECHNOLOGY, INC.

CA VI (F-12): sc-166679

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

1. Sutherland, G.R., et al. 1989. The gene for human carbonic anhydrase VI (CA VI) is on the tip of the short arm of chromosome 1. Cytogenet. Cell Genet. 50: 149-150.
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.

CHROMOSOMAL LOCATION

Genetic locus: CA6 (human) mapping to 1p36.23.

SOURCE

CA VI (F-12) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 65-95 near the N-terminus of CA VI of human origin.

PRODUCT

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

CA VI (F-12) is available conjugated to agarose (sc-166679 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-166679 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-166679 PE), fluorescein (sc-166679 FITC), Alexa Fluor® 488 (sc-166679 AF488), Alexa Fluor® 546 (sc-166679 AF546), Alexa Fluor® 594 (sc-166679 AF594) or Alexa Fluor® 647 (sc-166679 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-166679 AF680) or Alexa Fluor® 790 (sc-166679 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-166679 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

CA VI (F-12) is recommended for detection of precursor and mature CA VI of human 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 (h): sc-77334, CA VI shRNA Plasmid (h): sc-77334-SH and CA VI shRNA (h) Lentiviral Particles: sc-77334-V.

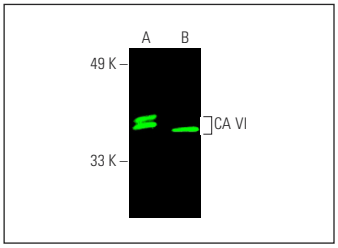
Molecular Weight of CA VI: 33/37 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227 or U-937 cell lysate: sc-2239.

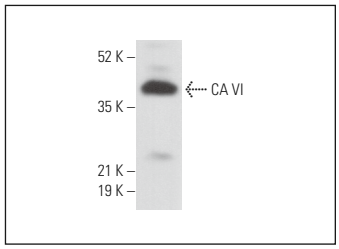
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ 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. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



CA VI (F-12): sc-166679. Near-infrared western blot analysis of CA VI expression in Hep G2 (**A**) and U-937 (**B**) whole cell lysates. Blocked with UltraCruz® Blocking Reagent: sc-516214. Detection reagent used: m-IgGκ BP-CFL 680: sc-516180.



CA VI (F-12): sc-166679. Western blot analysis of CA VI expression in U-937 whole cell lysate. Detection reagent used: m-IgGκ BP-HRP: sc-516102.

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.

PROTOCOLS

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