SANTA CRUZ BIOTECHNOLOGY, INC.

PRH1/2 (E-14): sc-169030

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Acidic and basic proline-rich proteins make up approximately two-thirds of the parotid salivary proteins and play important roles at tooth surfaces. Similarities in amino acid composition suggest that closely linked salivary proteins arose by way of gene duplication. Proline-rich protein (PRP) genes map to human chromosome 12, with salivary protein gene complex regionalization at 12p13.2. Proline-rich salivary proteins are hypothesized to be coded by six loci, two loci coding for acidic proteins. Genes at 2 of these loci, PRH1 (acidic salivary proline-rich protein, HaeIII type, 1) and PRH2 (acidic salivary proline-rich protein, HaeIII type, 2), contain repeated cleavage sites for the restriction enzyme HaeIII and code for PRPs. PRH1/2, also known as salivary acidic proline-rich phosphoprotein 1/2, PRP-1/PRP-2 or parotid proline-rich protein 1/2, is a 166 amino acid secreted protein that functions as a highly potent inhibitor of calcium phosphate crystal growth. Similar to other PRPs, PRH1/2 provides a protective and reparative environment for dental enamel, which is important for teeth integrity.

REFERENCES

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4. Maeda, N., et al. 1985. Differential RNA splicing and post-translational cleavages in the human salivary proline-rich protein gene system. J. Biol. Chem. 260: 11123-11130.
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6. Kim, H.S., et al. 1986. Structures of two HaeIII-type genes in the human salivary proline-rich protein multigene family. J. Biol. Chem. 261: 6712-6718.
7. Azen, E.A., et al. 1987. Alleles at the PRH1 locus coding for the human salivary-acidic proline-rich proteins Pa, Db, and PIF. Am. J. Hum. Genet. 41: 1035-1047.
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9. Azen, E.A. 1998. A frequent mutation in the acidic proline-rich protein gene, PRH2, causing a Q147K change closely adjacent to the bacterial binding domain of the cognate salivary PRP (Pr1') in Afro-Americans. Mutations in brief no. 154. Online. Hum. Mutat. 12: 72.

CHROMOSOMAL LOCATION

Genetic locus: PRH1/PRH2 (human) mapping to 12p13.2.

RESEARCH USE

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

SOURCE

PRH1/2 (E-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of PRH2 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-169030 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

PRH1/2 (E-14) is recommended for detection of PRH1 and PRH2 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

Molecular Weight of PRH1/2: 17 kDa.

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) 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.

STORAGE

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

PROTOCOLS

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