SANTA CRUZ BIOTECHNOLOGY, INC.

PRB1-3 (N-13): sc-169028

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The Power to Question

BACKGROUND

Salivary proline-rich proteins are synthesized in acinar cells of salivary glands and function as essential components of parotid and submandibular saliva. There are six members of the human salivary proline-rich protein family, namely, PRB1, PRB2, PRB3, PRB4, PRH1 and PRH2, each of which is encoded by a gene approximately 4 kb long with an exon containing a proline-rich portion. Thought to originate from a single ancestral gene, members of the salivary proline-rich protein family are encoded by genes that map to a cluster on human chromosome 12p13.2. PRB1 (proline-rich protein BstNI subfamily 1), also known as basic salivary proline-rich protein 1, PRB1M, PM, PMF, PMS, salivary proline-rich protein or PRB1L, is a 392 amino acid secreted protein that is cleaved into 3 chains and contains multiple tandem repeats. PRB2 (proline-rich protein BstNI subfamily 2), also known as basic salivary proline-rich protein 2, Ps, cP7, PRPPRB1 or con1 glycoprotein, is a 416 amino acid secreted protein that is cleaved into 5 chains with polymorphic repeats varying among alleles. PRB3 (proline-rich protein BstNI subfamily 3), also known as basic salivary proline-rich protein 3, parotid salivary glycoprotein G_1, proline-rich protein G_1, G_1 or PRG, is a 309 amino acid secreted protein with polymorphic repeats varying among alleles.

REFERENCES

1. Ikemoto, S., ET AL. 1977. New Genetic marker in human parotid saliva (PM). Science 197: 378-379.
2. Bennick, A. 1982. Salivary proline-rich proteins. Mol. Cell. Biochem. 45: 83-99.
3. Azen, E.A., ET AL. 1993. PRBI gene variants coding for length and null polymorphisms among human salivary Ps, PmF, PmS, and Pe proline-rich proteins (PRPs). Am. J. Hum. Genet. 53: 264-278.
4. Kim, H.S., ET AL. 1993. The structure and evolution of the human salivary proline-rich protein gene family. Mamm. Genome 4: 3-14.
5. Stubbs, M., ET AL. 1998. Encoding of human basic and glycosylated proline-rich proteins by the PRB gene complex and proteolytic processing of their precursor proteins. Arch. Oral Biol. 43: 753-770.
6. Castle, A.M. and Castle, J.D. 1998. Enhanced glycosylation and sulfation of secretory proteoglycans is coupled to the expression of a basic secretory protein. Mol. Biol. Cell 9: 575-583.
7. Chan, M. and Bennick, A. 2001. Proteolytic processing of a human salivary proline-rich protein precursor by proprotein convertases. Eur. J. Biochem. 268: 3423-3431.

CHROMOSOMAL LOCATION

Genetic locus: PRB1/PRB2/PRB3 (human) mapping to 12p13.2.

SOURCE

PRB1-3 (N-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of PRB3 of human origin.

RESEARCH USE

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

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-169028 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

PRB1-3 (N-13) is recommended for detection of PRB1, PRB2 and PRB3 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); may cross-react with PRB4, PRH1 and PRH2.

Molecular Weight of PRB1: 39 kDa.

Molecular Weight of PRB2: 41 kDa.

Molecular Weight of PRB3: 31 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.

SELECT PRODUCT CITATIONS

1. Yang, D., et al. 2013. Induction of autophagy and senescence by knockdown of ROC1 E3 ubiquitin ligase to suppress the growth of liver cancer cells. Cell Death Differ. 20: 235-247.
2. Yang, D., et al. 2013. Induction of senescence by adenosine suppressing the growth of lung cancer cells. Biochem. Biophys. Res. Commun. 440: 62-67.

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.