SANTA CRUZ BIOTECHNOLOGY, INC.

Pax-9 (H-95): sc-25410

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Pax genes contain paired domains with strong homology to genes in *Drosophila* which are involved in programming early development. PAX9, a member of the paired box-containing gene family, is closely related in its paired domain to PAX1. The PAX9 gene encodes the highly conserved paired domain, and the gene is a member of the same subgroup as PAX1/undulated. Pax-9 is essential for the development of a variety of organs and skeletal elements. Mutations in either the PAX1 or the PAX9 genes may produce an inherited skeletal disorder such as the Jarcho-Levin syndrome or other forms of spondylocostal dysplasia, conditions resembling "undulated" in the mouse. A frameshift mutation within the paired domain of Pax-9, was identified in a family segregating autosomal dominant oligodontia whose members had normal primary dentition but lacked most permanent molars. In addition to lack of permanent molars, some individuals also lacked maxillary and/or mandibular second premolars, as well as mandibular central incisors. The gene which encodes PAX9 maps to human chromosome 14q13.3.

REFERENCES

1. Stapleton, P., et al. 1993. Chromosomal localization of seven PAX genes and cloning of a novel family member, Pax-9. Nat. Genet. 3: 292-298.
2. Wallin, J., et al. 1993. A new Pax gene, Pax9, maps to mouse chromosome 12. Mamm. Genome 4: 354-358.
3. Peters, H., et al. 1998. Pax-9-deficient mice lack pharyngeal pouch derivatives and teeth and exhibit craniofacial and limb abnormalities. Genes Dev. 12: 2735-2747.
4. LeClair, E.E., et al. 1999. Expression of the paired-box genes Pax-1 and Pax-9 in limb skeleton development. Dev. Dyn. 214:101-115.
5. Stockton, D.W., et al. 2000. Mutation of Pax-9 is associated with oligodontia. Nat. Genet. 24: 18-19.

CHROMOSOMAL LOCATION

Genetic locus: PAX9 (human) mapping to 14q13.3; Pax9 (mouse) mapping to 12 C1.

SOURCE

Pax-9 (H-95) is a rabbit polyclonal antibody raised against amino acids 247-341 mapping at the C-terminus of Pax-9 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.

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-25410 X, 200 µg/0.1 ml.

STORAGE

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

APPLICATIONS

Pax-9 (H-95) is recommended for detection of Pax-9 of mouse, rat and 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).

Pax-9 (H-95) is also recommended for detection of Pax-9 in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for Pax-9 siRNA (h): sc-38756, Pax-9 siRNA (m): sc-38757, Pax-9 shRNA Plasmid (h): sc-38756-SH, Pax-9 shRNA Plasmid (m): sc-38757-SH, Pax-9 shRNA (h) Lentiviral Particles: sc-38756-V and Pax-9 shRNA (m) Lentiviral Particles: sc-38757-V.

Pax-9 (H-95) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

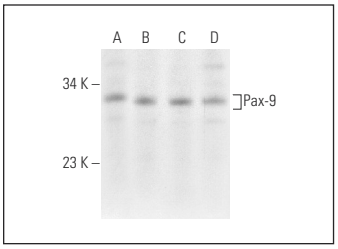
Molecular Weight of Pax-9: 35 kDa.

Positive Controls: U-2 OS cell lysate: sc-2295, A549 cell lysate: sc-2413 or A-431 whole cell lysate: sc-2201.

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



Pax-9 (H-95): sc-25410. Western blot analysis of Pax-9 expression in U-2 OS (**A**), A549 (**B**), NCI-H1299 (**C**) and A-431 (**D**) whole cell lysates.

RESEARCH USE

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

PROTOCOLS

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