SANTA CRUZ BIOTECHNOLOGY, INC.

Pax-3/7 (H-208): sc-25409

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Pax genes contain paired domains that share strong homology to genes in *Drosophila* which are involved in programming early development. The product of the Pax-3 gene is a DNA-binding protein expressed during early neurogenesis. Pax-3 is a protein containing both a paired domain and a paired-type homeodomain. During early neurogenesis, Pax-3 expression is limited to mitotic cells in the ventricular zone of the developing spinal cord and to distinct regions in the hindbrain, midbrain and diencephalon. In 10-12 day embryos, expression of Pax-3 is also seen in neural crest cells of the developing spinal ganglia, the craniofacial mesectoderm and in limb mesenchyme. Mutations in the MITF and Pax-3 genes, encoding transcriptions factors, are responsible for Waardenburg syndrome II (WS2) and WS1/WS3, respectively. Pax-7 is a gene specifically expressed in cultured satellite cell-derived myoblasts. *In situ* hybridization revealed that Pax-7 is also expressed in satellite cells residing in adult muscle. The gene which encodes Pax-7 maps to human chromosome 1p36.13.

CHROMOSOMAL LOCATION

Genetic locus: PAX3 (human) mapping to 2q36.1, PAX7 (human) mapping to 1p36.13; Pax3 (mouse) mapping to 1 C4, Pax7 (mouse) mapping to 4 D3.

SOURCE

Pax-3/7 (H-208) is a rabbit polyclonal antibody raised against amino acids 272-479 mapping at the C-terminus of Pax-3 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. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-25409 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-3/7 (H-208) is recommended for detection of Pax-3 and Pax-7 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), immunohistochemistry (including paraffin-embedded sections) (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-3/7 (H-208) is also recommended for detection of Pax-3 and Pax-7 in additional species, including equine.

Pax-3/7 (H-208) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

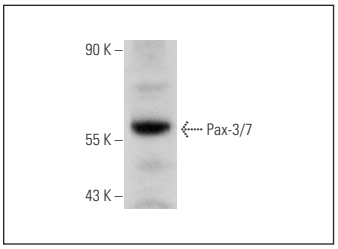
Molecular Weight of Pax-3/7: 56 kDa.

Positive Controls: C32 nuclear extract: sc-2136 or Hep G2 cell lysate: sc-2227.

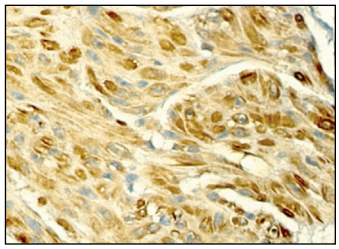
RECOMMENDED SECONDARY REAGENTS

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. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



Pax-3/7 (H-208): sc-25409. Western blot analysis of Pax-3/7 expression in Hep G2 whole cell lysate.



Pax-3/7 (H-208): sc-25409. Immunoperoxidase staining of formalin fixed, paraffin-embedded human bladder tumor showing nuclear localization.

SELECT PRODUCT CITATIONS

1. Brzóska, E., et al. 2009. Pax3 and Pax7 expression during myoblast differentiation *in vitro* and fast and slow muscle regeneration *in vivo.* Cell Biol. Int. 33: 483-492.
2. Fernandez, K., et al. 2010. Mice lacking dystrophin or α sarcoglycan spontaneously develop embryonal rhabdomyosarcoma with cancer-associated p53 mutations and alternatively spliced or mutant Mdm2 transcripts. Am. J. Pathol. 176: 416-434.
3. Kamaszewski, M., et al. 2014. The influence of feeding diets containing wheat gluten supplemented with dipeptides or free amino acids on structure and development of the skeletal muscle of carp *(Cyprinus carpio).* Aquacult. Int. 22: 259-271.

RESEARCH USE

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