

Pax-1 (M-116): sc-25407

BACKGROUND

Pax genes contain paired domains with strong homology to genes in *Drosophila* that are involved in programming early development. Pax-1 is a sequence-specific DNA binding-protein with transcriptional activating properties. The expression pattern of Pax-1 during mouse embryogenesis indicates that it may play an important role in the development of the vertebral column. The autosomal recessive mutation "undulated" (un) in the mouse exhibits vertebral anomalies along the entire rostrocaudal axis and is associated with a point mutation (G-to-A transition) at position 15 leading to a gly-to-ser replacement in a highly conserved region of the paired box of Pax-1. Pax-1 is required for the normal development of these three skeletal elements: the vertebral column, sternum, and scapula. Mice who are doubly heterozygous for the mutants "undulated" and "Patch" have a phenotype reminiscent of an extreme form of spina bifida occulta in humans. The gene which encodes Pax-1 maps to human chromosome 20p11.2.

REFERENCES

- Lichter, P., et al. 1990. High-resolution mapping of human chromosome 11 by *in situ* hybridization with cosmid clones. *Science* 247: 64-69.
- Chalepakis, G., et al. 1991. The molecular basis of the undulated/Pax-1 mutation. *Cell* 66: 873-884.
- Helwig, U., et al. 1995. Interaction between undulated and Patch leads to an extreme form of spina bifida in double-mutant mice. *Nat. Genet.* 11: 60-63.
- Deutsch, U., et al. 1988. Pax 1, a member of a paired box homologous murine gene family, is expressed in segmented structures during development. *Cell* 53: 617-625.
- LocusLink Report (LocusID: 167411). <http://www.ncbi.nlm.nih.gov/LocusLink/>

CHROMOSOMAL LOCATION

Genetic locus: PAX1 (human) mapping to 20p11.22; Pax1 (mouse) mapping to 2 G2.

SOURCE

Pax-1 (M-116) is a rabbit polyclonal antibody raised against amino acids 246-361 of Pax-1 of mouse 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-25407 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-1 (M-116) is recommended for detection of Pax-1 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-1 (M-116) is also recommended for detection of Pax-1 in additional species, including canine.

Suitable for use as control antibody for Pax-1 siRNA (h): sc-38743, Pax-1 siRNA (m): sc-38744, Pax-1 shRNA Plasmid (h): sc-38743-SH, Pax-1 shRNA Plasmid (m): sc-38744-SH, Pax-1 shRNA (h) Lentiviral Particles: sc-38743-V and Pax-1 shRNA (m) Lentiviral Particles: sc-38744-V.

Pax-1 (M-116) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of Pax-1: 46 kDa.

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.

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.


 MONOS
 Satisfaction
 Guaranteed

Try **Pax (D-7): sc-514352**, our highly recommended monoclonal alternative to Pax-1 (M-116). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **Pax (D-7): sc-514352**.