

Pax-3/7 (E-10): sc-365613

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 transcription 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 (E-10) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 439-464 at the C-terminus of Pax-3 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain 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-365613 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-365613 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

Pax-3/7 (E-10) is recommended for detection of Pax-3 and Pax-7 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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 (E-10) is also recommended for detection of Pax-3 and Pax-7 in additional species, including equine, bovine, porcine and avian.

Pax-3/7 (E-10) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

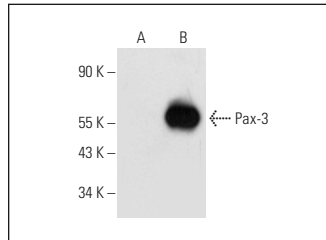
Molecular Weight of Pax-3/7: 56 kDa.

Positive Controls: Pax-3 (m): 293T Lysate: sc-122398 or C32 nuclear extract: sc-2136.

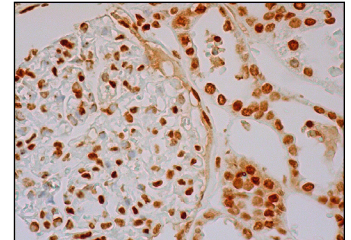
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



Pax-3/7 (E-10): sc-365613. Western blot analysis of Pax-3 expression in non-transfected: sc-117752 (A) and mouse Pax-3 transfected: sc-122398 (B) 293T whole cell lysates.



Pax-3/7 (E-10): sc-365613. Immunoperoxidase staining of formalin fixed, paraffin-embedded human kidney tissue showing nuclear staining of cells in glomeruli and cells in tubules.

SELECT PRODUCT CITATIONS


- Tian, Z.L., et al. 2015. $\alpha 7$ nAChR is expressed in satellite cells at different myogenic status during skeletal muscle wound healing in rats. *J. Mol. Histol.* 46: 499-509.
- Aboalola, D. and Han, V.K.M. 2017. Insulin-like growth factor binding protein-6 alters skeletal muscle differentiation of human mesenchymal stem cells. *Stem Cells Int.* 2017: 2348485.
- Aboalola, D. and Han, V.K.M. 2017. Different effects of Insulin-like growth factor-1 and Insulin-like growth factor-2 on myogenic differentiation of human mesenchymal stem cells. *Stem Cells Int.* 2017: 8286248.

STORAGE

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

RESEARCH USE

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



See **Pax-3/7 (B-5): sc-365843** for Pax-3/7 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.