

## Pax-3/7 (N-19): sc-7749

### 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 (N-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-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-7749 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-7749 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### APPLICATIONS

Pax-3/7 (N-19) 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Pax-3/7 (N-19) is also recommended for detection of Pax-3 and Pax-7 in additional species, including equine, canine, bovine and avian.

Pax-3/7 (N-19) 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 Pax-3 (m): 293T Lysate: sc-122398.

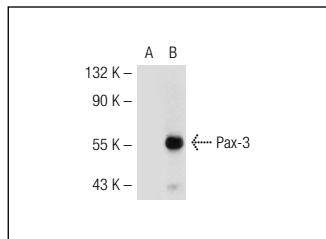
### RESEARCH USE

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

### STORAGE

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

### DATA



Pax-3/7 (N-19): sc-7749. 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.

### SELECT PRODUCT CITATIONS

- Sumegi, J., et al. 2010. Recurrent t(2;2) and t(2;8) translocations in rhabdomyosarcoma without the canonical PAX-FOXO1 fuse PAX3 to members of the nuclear receptor transcriptional coactivator family. *Genes Chromosomes Cancer* 49: 224-236.
- Tarnowski, M., et al. 2010. Regulation of expression of stromal-derived factor-1 receptors: CXCR4 and CXCR7 in human rhabdomyosarcomas. *Mol. Cancer Res.* 8: 1-14.
- Fiaccavento, R., et al. 2010. An omega-3 fatty acid-enriched diet prevents skeletal muscle lesions in a hamster model of dystrophy. *Am. J. Pathol.* 177: 2176-2184.
- Calhabeu, F., et al. 2013. Alveolar rhabdomyosarcoma-associated proteins PAX3/FOXO1A and PAX7/FOXO1A suppress the transcriptional activity of MyoD-target genes in muscle stem cells. *Oncogene* 32: 651-662.

### PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.



Try **Pax-3/7 (B-5): sc-365843** or **Pax-3/7 (E-10): sc-365613**, our highly recommended monoclonal alternatives to Pax-3/7 (N-19). Also, for AC, HRP, FITC, PE, Alexa Fluor<sup>®</sup> 488 and Alexa Fluor<sup>®</sup> 647 conjugates, see **Pax-3/7 (B-5): sc-365843**.