

Pax-3 (F-2): sc-376204

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 PAX3 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 (WSII) and WSI/WSIII, respectively.

REFERENCES

- Goulding, M.D., et al. 1991. Pax-3, a novel murine DNA-binding protein expressed during early neurogenesis. *EMBO J.* 10: 1135-1147.
- Tassabehji, M., et al. 1992. Waardenburg's syndrome patients have mutations in the human homologue of the Pax-3 paired box gene. *Nature* 355: 635-636.
- Hoth, C.F., et al. 1993. Mutations in the paired domain of the human Pax-3 gene cause Klein-Waardenburg syndrome (WSIII) as well as Waardenburg syndrome type I (WSI). *Am. J. Hum. Genet.* 52: 455-462.
- 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.
- Tsukamoto, K., et al. 1994. Isolation of two isoforms of the Pax-3 gene transcripts and their tissue-specific alternative expression in human adult tissues. *Hum. Genet.* 93: 270-274.
- Watanabe, A., et al. 1998. Epistatic relationship between Waardenburg syndrome genes MITF and Pax-3. *Nat. Genet.* 18: 283-286.
- Wachtel, M., et al. 2004. Gene expression signatures identify rhabdomyosarcoma subtypes and detect a novel t(2;2)(q35;p23) translocation fusing Pax-3 to NCoA-1. *Cancer Res.* 64: 5539-5545.

CHROMOSOMAL LOCATION

Genetic locus: PAX3 (human) mapping to 2q36.1; Pax3 (mouse) mapping to 1 C4.

SOURCE

Pax-3 (F-2) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 387-425 near the C-terminus of Pax-3 of human origin.

PRODUCT

Each vial contains 200 µg IgG₃ 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-376204 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-376204 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

Pax-3 (F-2) is recommended for detection of Pax-3 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Pax-3 (F-2) is also recommended for detection of Pax-3 in additional species, including equine, bovine, porcine and avian.

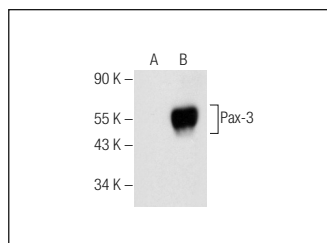
Suitable for use as control antibody for Pax-3 siRNA (h): sc-38747, Pax-3 siRNA (m): sc-38748, Pax-3 shRNA Plasmid (h): sc-38747-SH, Pax-3 shRNA Plasmid (m): sc-38748-SH, Pax-3 shRNA (h) Lentiviral Particles: sc-38747-V and Pax-3 shRNA (m) Lentiviral Particles: sc-38748-V.

Pax-3 (F-2) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of Pax-3: 56 kDa.

Positive Controls: Pax-3 (m): 293T Lysate: sc-122398.

DATA



Pax-3 (F-2): sc-376204. 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.

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.

PROTOCOLS

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



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.