

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

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, in the craniofacial mesectoderm and in limb mesenchyme. Mutations in the MITF and PAX3 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 PAX3 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, PAX9. *Nat. Genet.* 3: 292-298.
- Tsukamoto, K., et al. 1994. Isolation of two isoforms of the PAX3 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 PAX3. *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 PAX3 to NCOA1. *Cancer Res.* 64: 5539-5545.

CHROMOSOMAL LOCATION

Genetic locus: Pax3 (mouse) mapping to 1 C4.

PRODUCT

Pax-3 (m): 293T Lysate represents a lysate of mouse Pax-3 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

PROTOCOLS

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

APPLICATIONS

Pax-3 (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive Pax-3 antibodies. Recommended use: 10-20 µl per lane.

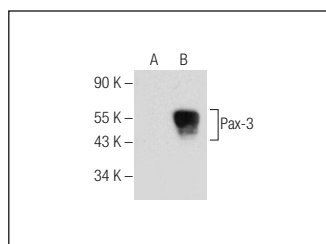
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

Pax-3 (A-5): sc-376215 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse Pax-3 expression in Pax-3 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

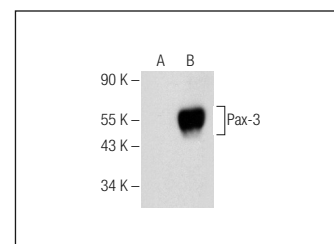
RECOMMENDED SUPPORT REAGENTS

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.

DATA



Pax-3 (A-5): sc-376215. 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 (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.

RESEARCH USE

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