

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

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.

CHROMOSOMAL LOCATION

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

SOURCE

Pax-3 (A-5) 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 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-376215 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-376215 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

Pax-3 (A-5) 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 (A-5) 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 (A-5) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

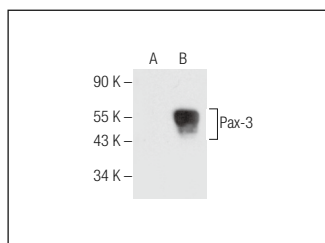
Molecular Weight of Pax-3: 56 kDa.

Positive Controls: Pax-3 (m): 293T Lysate: sc-122398 or HEK293T whole cell lysate: sc-45137.

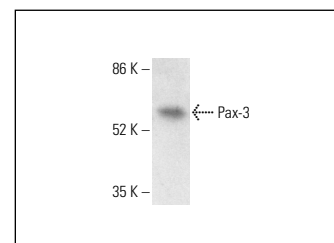
RECOMMENDED SUPPORT REAGENTS

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.

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 (A-5): sc-376215. Western blot analysis of Pax-3 expression in HEK293T whole cell lysate. Detection reagent used: m-IgG Fc BP-HRP: sc-525409.

SELECT PRODUCT CITATIONS

1. Su, X., et al. 2016. GFAP expression is regulated by Pax-3 in brain glioma stem cells. *Oncol. Rep.* 36: 1277-1284.
2. Zhao, L., et al. 2017. MeCP2 promotes gastric cancer progression through regulating FOXF1/Wnt5a/β-catenin and MYOD1/caspase-3 signaling pathways. *EBioMedicine* 16: 87-100.
3. Park, J.S., et al. 2019. Interleukin-21-mediated suppression of the Pax-3-Id3 pathway exacerbates the development of Sjögren's syndrome via follicular helper T cells. *Cytokine* 125: 154834.
4. Zhu, Z.J., et al. 2020. Marek's disease virus (*Gallid alphaherpesvirus 2*)-encoded miR-M2-5p simultaneously promotes cell proliferation and suppresses apoptosis through RBM24 and MYOD1-mediated signaling pathways. *Front. Microbiol.* 11: 596422.

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.