

# Pax (D-7): sc-514352

## BACKGROUND

The Pax gene family of nuclear transcription factors is comprised of nine family members that function during embryogenesis to regulate the temporal and position-dependent differentiation of cells. In addition, the family is involved in a variety of signal transduction pathways in the adult organism. Mutations in the Pax family of proteins have been linked to disease and cancer in humans. Pax genes contain paired domains with strong homology to genes in *Drosophila* which are involved in programming early development.

## REFERENCES

1. Deutsch, U., et al. 1988. Pax 1, a member of a paired box homologous murine gene family, is expressed in segmented structures during development. *Cell* 53: 617-625.
2. Goulding, M.D., et al. 1991. Pax-3, a novel murine DNA binding protein expressed during early neurogenesis. *EMBO J.* 10: 1135-1147.
3. Adams, B., et al. 1992. Pax-5 encodes the transcription factor BSAP and is expressed in B lymphocytes, the developing CNS, and adult testis. *Genes Dev.* 6: 1589-1607.
4. 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.
5. Hanson, I.M., et al. 1994. Mutations at the PAX6 locus are found in heterogeneous anterior segment malformations including Peters' anomaly. *Nat. Genet.* 6: 168-173.
6. Poleev, A., et al. 1995. Distinct functional properties of three human paired-box-protein, PAX8, isoforms generated by alternative splicing in thyroid, kidney and Wilms' tumors. *Eur. J. Biochem.* 228: 899-911.

## SOURCE

Pax (D-7) is a mouse monoclonal antibody raised against amino acids 72-150 of Pax-2 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>2a</sub> 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-514352 X, 200 µg/0.1 ml.

Pax (D-7) is available conjugated to agarose (sc-514352 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-514352 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514352 PE), fluorescein (sc-514352 FITC), Alexa Fluor® 488 (sc-514352 AF488), Alexa Fluor® 546 (sc-514352 AF546), Alexa Fluor® 594 (sc-514352 AF594) or Alexa Fluor® 647 (sc-514352 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-514352 AF680) or Alexa Fluor® 790 (sc-514352 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## STORAGE

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

## APPLICATIONS

Pax (D-7) is recommended for detection of Pax-1, Pax-2, Pax-3, Pax-5, Pax-6, Pax-7, Pax-8 and Pax-9 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 (D-7) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

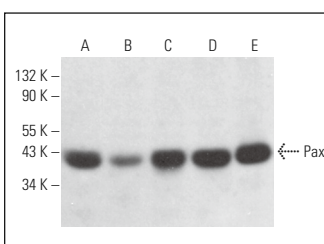
Molecular Weight of Pax: 44-50 kDa.

Positive Controls: M1 whole cell lysate: sc-364782, TF-1 cell lysate: sc-2412 or BYDP whole cell lysate: sc-364368.

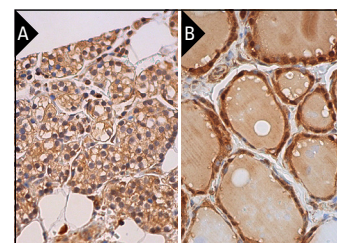
## RECOMMENDED SUPPORT REAGENTS

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 (D-7): sc-514352. Western blot analysis of Pax expression in TF-1 (A), BYDP (B), M1 (C) and P19 (D) whole cell lysates and HEL 92.1.7 nuclear extract (E).



Pax (D-7): sc-514352. Immunoperoxidase staining of formalin fixed, paraffin-embedded human parathyroid (A) and human thyroid (B) gland tissue showing nuclear and cytoplasmic staining of glandular cells.

## SELECT PRODUCT CITATIONS

1. Zhang, X., et al. 2020. Rapid exacerbation featuring acute leukemoid reaction after retrolaparoscopic nephrectomy: a rare case report of renal cell carcinoma with postoperative comprehensive genomic profiling. *World J. Surg. Oncol.* 18: 155.

## RESEARCH USE

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