

# Pax-5 (A-11): sc-13146

## BACKGROUND

The Pax family of nuclear transcription factors is comprised of nine members that function during embryogenesis to regulate the temporal and position-dependent differentiation of cells. Pax family genes are also involved in a variety of signal transduction pathways in the adult organism. Mutations in Pax proteins have been linked to disease and cancer in humans. For example, the human PAX5 gene encodes a B cell lineage-specific protein, Pax-5, also designated B cell specific activator protein or BSAP, which is expressed in pro-B, pre-B and mature B lymphocytes but not in plasma cells. Pax-5 functions to regulate not only B cell development, but also influences the balance between immunoglobulin secretion and B cell proliferation. Overexpression of Pax-5 has been implicated in cellular transformation, and in the case of small lymphocytic lymphomas with plasmacytoid differentiation, a t(9;14)(p13;q32) translocation resulting in the deregulation of PAX5 gene expression has been detected.

## REFERENCES

- 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.
- 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.

## CHROMOSOMAL LOCATION

Genetic locus: PAX5 (human) mapping to 9p13.2; Pax5 (mouse) mapping to 4 B1.

## SOURCE

Pax-5 (A-11) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 362-390 at the C-terminus of Pax-5 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>2a</sub> lambda 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-13146 X, 200 µg/0.1 ml.

Pax-5 (A-11) is available conjugated to agarose (sc-13146 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-13146 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-13146 PE), fluorescein (sc-13146 FITC), Alexa Fluor® 488 (sc-13146 AF488), Alexa Fluor® 546 (sc-13146 AF546), Alexa Fluor® 594 (sc-13146 AF594) or Alexa Fluor® 647 (sc-13146 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-13146 AF680) or Alexa Fluor® 790 (sc-13146 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-13146 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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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-5 (A-11) is recommended for detection of Pax-5 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:200-1:1,000), 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).

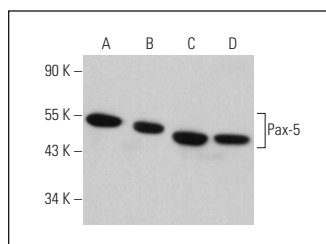
Suitable for use as control antibody for Pax-5 siRNA (h): sc-36193, Pax-5 siRNA (m): sc-36194, Pax-5 shRNA Plasmid (h): sc-36193-SH, Pax-5 shRNA Plasmid (m): sc-36194-SH, Pax-5 shRNA (h) Lentiviral Particles: sc-36193-V and Pax-5 shRNA (m) Lentiviral Particles: sc-36194-V.

Pax-5 (A-11) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

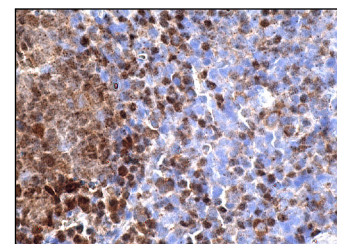
Molecular Weight of Pax-5: 46 kDa.

Positive Controls: Ramos cell lysate: sc-2216, Daudi cell lysate: sc-2415 or NAMALWA cell lysate: sc-2234.

## DATA



Pax-5 (A-11): sc-13146. Western blot analysis of Pax-5 expression in Ramos (A), NAMALWA (B) and Daudi (C) whole cell lysates and human tonsil tissue extract (D). Detection reagent used: m-IgG<sub>2a</sub> BP-HRP (Cruz Marker); sc-516132-CM.



Pax-5 (A-11): sc-13146. Immunoperoxidase staining of formalin fixed, paraffin-embedded human tonsil tissue showing nuclear staining of cells in germinal and non-germinal centers.

## SELECT PRODUCT CITATIONS

- Tumang, J.R., et al. 2005. Spontaneously Ig-secreting B-1 cells violate the accepted paradigm for expression of differentiation-associated transcription factors. *J. Immunol.* 174: 3173-3177.
- Fortschegger, K., et al. 2014. Functional heterogeneity of PAX5 chimeras reveals insight for leukemia development. *Mol. Cancer Res.* 12: 595-606.
- Liu, H., et al. 2014. Proteasome inhibitors evoke latent tumor suppression programs in pro-B MLL leukemias through MLL-AF4. *Cancer Cell* 25: 530-542.
- Perearnau, A., et al. 2017. p27<sup>Kip1</sup>, PCAF and PAX5 cooperate in the transcriptional regulation of specific target genes. *Nucleic Acids Res.* 45: 5086-5099.

## RESEARCH USE

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