

# Pax-5 (N-19): sc-1975

## 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. For example, the human Pax-5 gene encodes a B cell lineage specific protein called B cell specific activator protein or BSAP, which is expressed in pro-B, pre-B and mature B lymphocytes but not in plasma cells. BSAP functions to regulate not only B cell development, but also influences the balance between immunoglobulin secretion and B cell proliferation. Overexpression of BSAP 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 Pax-5 gene expression has been detected.

## CHROMOSOMAL LOCATION

Genetic locus: PAX5 (human) mapping to 9p13.2.

## SOURCE

Pax-5 (N-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of Pax-5 of human origin.

## PRODUCT

Each vial contains 200 µg IgG 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-1975 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-1975 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

## APPLICATIONS

Pax-5 (N-19) is recommended for detection of Pax-5 of human origin by Western Blotting (starting dilution 1:200, 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-5 (N-19) is also recommended for detection of Pax-5 in additional species, including equine, canine, bovine and porcine.

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

Pax-5 (N-19) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of Pax-5: 46 kDa.

Positive Controls: NAMALWA cell lysate: sc-2234.

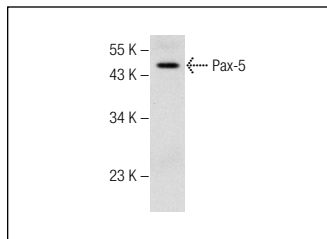
## RESEARCH USE

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

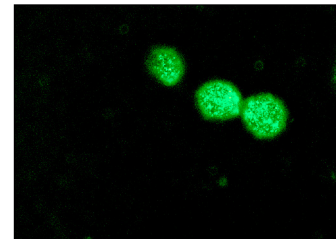
## STORAGE

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

## DATA



Pax-5 (N-19): sc-1975. Western blot analysis of Pax-5 expression in NAMALWA whole cell lysate.



Pax-5 (N-19): sc-1975. Immunofluorescence staining of methanol-fixed NAMALWA cells showing nuclear staining.

## SELECT PRODUCT CITATIONS

1. Anspach, J., et al. 2001. Reduction in DNA binding activity of the transcription factor Pax-5a in B Lymphocytes of aged mice<sup>1</sup>. *J. Immunol.* 166: 2617-2626.
2. Camacho, F.I., et al. 2003. Nodal marginal zone lymphoma: a heterogeneous tumor: a comprehensive analysis of a series of 27 cases. *Am. J. Surg. Pathol.* 27: 762-771.
3. Portis, T., et al. 2003. Epstein-Barr virus LMP2A interferes with global transcription factor regulation when expressed during B-lymphocyte development. *J. Virol.* 77: 105-114.
4. Gonda, H., et al. 2003. The balance between Pax-5 and Id2 activities is the key to AID gene expression. *J. Exp. Med.* 198: 1427-1437.
5. He, T., et al. 2011. Histone acetyltransferase p300 acetylates Pax5 and strongly enhances Pax5-mediated transcriptional activity. *J. Biol. Chem.* 286: 14137-14145.
6. Qiu, J.J., et al. 2011. The reduced and altered activities of PAX5 are linked to the protein-protein interaction motif (coiled-coil domain) of the PAX5-PML fusion protein in t-associated acute lymphocytic leukemia. *Oncogene* 30: 967-977.
7. Fortschegger, K., et al. 2014. Functional heterogeneity of PAX5 chimeras reveals insight for leukemia development. *Mol. Cancer Res.* 12: 595-606.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.



Try **Pax-5 (A-11): sc-13146** or **Pax-5 (E-9): sc-55515**, our highly recommended monoclonal alternatives to Pax-5 (N-19). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **Pax-5 (A-11): sc-13146**.