

Pax-5 (1H9): sc-130922

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

1. 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.
2. 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.
3. Busslinger, M., et al. 1995. The role of BSAP (Pax-5) in B cell development. *Curr. Opin. Gen. Dev.* 5: 595-601.
4. Busslinger, M., et al. 1996. Deregulation of Pax-5 by translocation of the Emu enhancer of the IgH locus adjacent to two alternative Pax-5 promoters in a diffuse large-cell lymphoma. *Proc. Natl. Acad. Sci. USA* 93: 6129-6134.
5. Dorfler, P., et al. 1996. C-terminal activating and inhibitory domains determine the transactivation potential of BSAP (Pax-5), Pax-2 and Pax-8. *EMBO J.* 15: 1971-1982.
6. Mahmoud, M.S., et al. 1996. Altered expression of Pax-5 gene in human myeloma cells. *Blood* 87: 4311-4315.

CHROMOSOMAL LOCATION

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

SOURCE

Pax-5 (1H9) is a rat monoclonal antibody raised against a recombinant protein corresponding to amino acids 154-284 of Pax-5 of mouse origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Pax-5 (1H9) is available conjugated to either phycoerythrin (sc-130922 PE) or fluorescein (sc-130922 FITC), 200 µg/ml, for IF, IHC(P) and FCM.

RESEARCH USE

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

APPLICATIONS

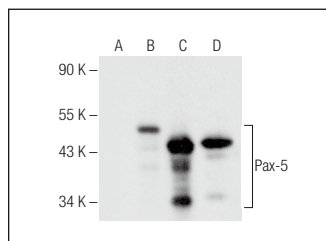
Pax-5 (1H9) is recommended for detection of Pax-5 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 µg per 1 x 10⁶ cells).

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.

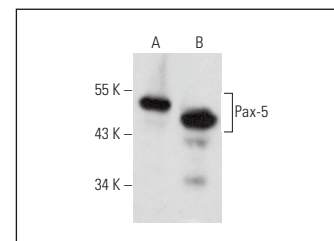
Molecular Weight of Pax-5: 46 kDa.

Positive Controls: Pax-5 (h): 293 Lysate: sc-176172, NAMALWA cell lysate: sc-2234 or BJAB nuclear extract: sc-2145.

DATA



Pax-5 (1H9): sc-130922. Western blot analysis of Pax-5 expression in non-transfected 293: sc-110760 (A), human Pax-5 transfected 293: sc-176172 (B) and NAMALWA (C) whole cell lysates and BJAB nuclear extract (D).



Pax-5 (1H9): sc-130922. Western blot analysis of Pax-5 expression in Ramos (A) and IB4 (B) whole cell lysates.

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.



See **Pax-5 (A-11): sc-13146** for Pax-5 antibody conjugates, including AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647.