SANTA CRUZ BIOTECHNOLOGY, INC.

WASP (H-250): sc-8353

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The Wiskott-Aldrich syndrome (WAS) is a disorder that results from a monogenic defect that has been mapped to the short arm of the X chromosome at Xp11.23. WAS is characterized by thrombocytopenia, eczema, defects in cell-mediated and humoral immunity and a propensity for lymphoproliferative disease. The gene that is mutated in the syndrome encodes a proline-rich protein of unknown function designated WAS protein (WASP). A clue to WASP function came from the observation that T cells from affected males had an irregular cellular morphology and a disarrayed cytoskeleton suggesting the involvement of WASP in cytoskeletal organization. Close examination of the WASP sequence revealed a putative Cdc42/Rac interacting domain, homologous with those found in PAK65 and ACK. Subsequent investigation has shown WASP to be a true downstream effector of Cdc42.

REFERENCES

1. Reinhard, M., et al. 1992. The 46/50 kDa phosphoprotein VASP purified from human platelets is a novel protein associated with actin filaments and focal contacts. EMBO J. 11: 2063-2070.
2. Reinhard, M., et al. 1995. Identification, purification and characterization of a zyxin-related protein that binds the focal adhesion and microfilament protein VASP (vasodilator-stimulated phosphoprotein). Proc. Natl. Acad. Sci. USA 92: 7956-7960.

CHROMOSOMAL LOCATION

Genetic locus: WAS (human) mapping to Xp11.23, WASL (human) mapping to 7q31.32; Was (mouse) mapping to X A1.1, Wasl (mouse) mapping to 6 A3.1.

SOURCE

WASP (H-250) is a rabbit polyclonal antibody raised against amino acids 1-250 of WASP 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.

APPLICATIONS

WASP (H-250) is recommended for detection of WASP and, to a lesser extent, N-WASP 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), 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).

Molecular Weight of WASP: 66 kDa.

Positive Controls: Ramos cell lysate: sc-2216, MOLT-4 cell lysate: sc-2233 or BJAB whole cell lysate: sc-2207.

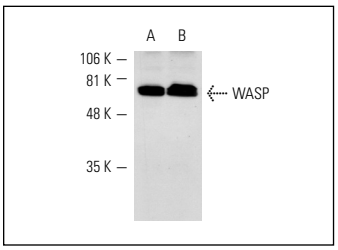
STORAGE

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

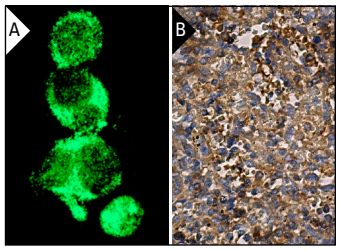
RESEARCH USE

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

DATA



WASP (H-250): sc-8353. Western blot analysis of WASP expression in BJAB (**A**) and MOLT-4 (**B**) whole cell lysates.



WASP (H-250): sc-8353. Immunofluorescence staining of methanol-fixed BJAB cells showing cytoplasmic staining (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human spleen tissue showing cytoplasmic staining of cells in red pulp (**B**).

SELECT PRODUCT CITATIONS

1. Krawczyk, C., et al. 2000. Cbl-b is a negative regulator of receptor clustering and raft aggregation in T cells. Immunity 13: 463-473.
2. Isaac, B.M., et al. 2010. N-WASP has the ability to compensate for the loss of WASP in macrophage podosome formation and chemotaxis. Exp. Cell Res. 316: 3406-3416.
3. Trifari, S., et al. 2010. Revertant T lymphocytes in a patient with Wiskott-Aldrich syndrome: analysis of function and distribution in lymphoid organs. J. Allergy Clin. Immunol. 125: 439-448.
4. Lee, W.I., et al. 2010. Clinical aspects and genetic analysis of Taiwanese patients with Wiskott-Aldrich syndrome protein mutation: the first identification of x-linked thrombocytopenia in the Chinese with novel mutations. J. Clin. Immunol. 30: 593-601.
5. Stabile, H., et al. 2010. Impaired NK-cell migration in WAS/XLT patients: role of Cdc42/WASp pathway in the control of chemokine-induced β2 integrin high-affinity state. Blood 115: 2818-2826.
6. Pauker, M.H., et al. 2011. Functional cooperation between the proteins Nck and ADAP is fundamental for actin reorganization. Mol. Cell. Biol. 31: 2653-2666.
7. Calvez, R., et al. 2011. The Wiskott-Aldrich syndrome protein permits assembly of a focused immunological synapse enabling sustained T-cell receptor signaling. Haematologica 96: 1415-1423.
8. Reicher, B., et al. 2012. Ubiquitylation-dependent negative regulation of WASp is essential for actin cytoskeleton dynamics. Mol. Cell. Biol. 32: 3153-3163.