

WASP (B-9): sc-13139

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. 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.

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 (B-9) is a mouse monoclonal antibody raised against amino acids 1-250 of WASP of human origin.

PRODUCT

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

WASP (B-9) is available conjugated to agarose (sc-13139 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-13139 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-13139 PE), fluorescein (sc-13139 FITC), Alexa Fluor[®] 488 (sc-13139 AF488), Alexa Fluor[®] 546 (sc-13139 AF546), Alexa Fluor[®] 594 (sc-13139 AF594) or Alexa Fluor[®] 647 (sc-13139 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-13139 AF680) or Alexa Fluor[®] 790 (sc-13139 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

WASP (B-9) is recommended for detection of WASP and N-WASP of mouse, rat, human and mink 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), flow cytometry (1 µg per 1 x 10⁶ cells) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Molecular Weight of WASP: 66 kDa.

Positive Controls: MOLT-4 cell lysate: sc-2233, K-562 whole cell lysate: sc-2203 or WEHI-231 whole cell lysate: sc-2213.

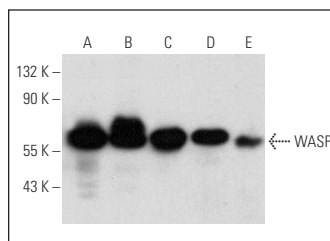
STORAGE

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

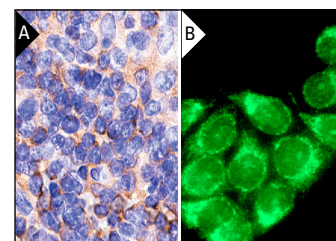
RESEARCH USE

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

DATA



WASP (B-9): sc-13139. Western blot analysis of WASP expression in MOLT-4 (A), K-562 (B), TK-1 (C), WEHI-231 (D) and RBL-1 (E) whole cell lysates.



WASP (B-9): sc-13139. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human lymphoma tissue showing cytoplasmic staining (A). Immunofluorescence staining of methanol-fixed HeLa cells (B) showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

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- Baptista, M.A., et al. 2016. Deletion of Wiskott-Aldrich syndrome protein triggers Rac2 activity and increased cross-presentation by dendritic cells. *Nat. Commun.* 7: 12175.
- Medina, S.S., et al. 2017. Intermittent low platelet counts hampering diagnosis of X-linked thrombocytopenia in children: report of two unrelated cases and a novel mutation in the gene coding for the Wiskott-Aldrich syndrome protein. *BMC Pediatr.* 17: 151.
- Keszei, M., et al. 2018. Constitutive activation of WASp in X-linked neutropenia renders neutrophils hyperactive. *J. Clin. Invest.* 128: 4115-4131.
- Foxall, E., et al. 2019. PAK4 kinase activity plays a crucial role in the podosome ring of myeloid cells. *Cell Rep.* 29: 3385-3393.e6.
- Poirier, M.B., et al. 2020. F-Actin flashes on phagosomes mechanically deform contents for efficient digestion in macrophages. *J. Cell Sci.* 133: jcs239384.
- Mondaca, J.M., et al. 2021. Molecular basis of LH action on breast cancer cell migration and invasion via kinase and scaffold proteins. *Front. Cell Dev. Biol.* 8: 630147.
- Yuan, B., et al. 2022. Wiskott-Aldrich syndrome protein forms nuclear condensates and regulates alternative splicing. *Nat. Commun.* 13: 3646.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

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