

# VASP (A-11): sc-46668



The Power to Question

## BACKGROUND

The Wiskott-Aldrich syndrome (WAS) is characterized by thrombocytopenia, eczema, defects in cell-mediated and humoral immunity, and a propensity for lymphoproliferative diseases. The syndrome is the result of a mutation in the gene encoding a proline-rich protein termed WASP. WASP has been identified as a downstream effector of Cdc42 and has been implicated in Actin polymerization and cytoskeletal organization. A distantly related protein, VASP (vaso-dilator-stimulated phosphoprotein), is involved in the maintenance of cytoarchitecture by interacting with Actin-like filaments. VASP shares a limited degree of homology with the amino-terminus of WASP, which is frequently mutated in WAS patients. An established substrate of cAMP and cGMP dependent kinases, VASP is phosphorylated on a regulatory Serine residue 157 and localizes to focal adhesions, microfilaments and highly active regions of the plasma membrane. VASP is highly expressed in human platelets and, like WASP, may play a role in cytoskeletal organization.

## CHROMOSOMAL LOCATION

Genetic locus: VASP (human) mapping to 19q13.32; Vasp (mouse) mapping to 7 A3.

## SOURCE

VASP (A-11) is a mouse monoclonal antibody raised against amino acids 271-360 of VASP of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>2a</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

VASP (A-11) is available conjugated to agarose (sc-46668 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-46668 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-46668 PE), fluorescein (sc-46668 FITC), Alexa Fluor® 488 (sc-46668 AF488), Alexa Fluor® 546 (sc-46668 AF546), Alexa Fluor® 594 (sc-46668 AF594) or Alexa Fluor® 647 (sc-46668 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-46668 AF680) or Alexa Fluor® 790 (sc-46668 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

## APPLICATIONS

VASP (A-11) is recommended for detection of VASP of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

Suitable for use as control antibody for VASP siRNA (h): sc-29516, VASP siRNA (m): sc-36809, VASP shRNA Plasmid (h): sc-29516-SH, VASP shRNA Plasmid (m): sc-36809-SH, VASP shRNA (h) Lentiviral Particles: sc-29516-V and VASP shRNA (m) Lentiviral Particles: sc-36809-V.

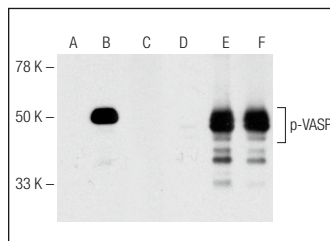
Molecular Weight of VASP: 46 kDa.

Molecular Weight of phosphorylated VASP: 50 kDa.

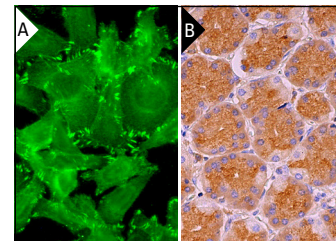
## STORAGE

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

## DATA



Western blot analysis of VASP phosphorylation in non-transfected: sc-117752 (A,D), untreated human VASP transfected: sc-114829 (B,E) and lambda protein phosphatase (sc-200312A) treated human VASP transfected: sc-114829 (C,F) 293T whole cell lysates. Antibodies tested include p-VASP (A-7): sc-365563 (A,B,C) and VASP (A-11): sc-46668 (D,E,F).



VASP (A-11): sc-46668. Immunofluorescence staining of formalin-fixed SW480 cells showing focal adhesions and membrane localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human lower stomach tissue showing cytoplasmic staining of glandular cells (B).

## SELECT PRODUCT CITATIONS

- Tao, Y., et al. 2006. Phosphorylated vasodilator-stimulated phosphoprotein is localized on mitotic spindles of the gastric cancer cell line SGC-7901. *World J. Gastroenterol.* 12: 7478-7481.
- Laban, H., et al. 2018. VASP regulates leukocyte infiltration, polarization, and vascular repair after ischemia. *J. Cell Biol.* 217: 1503-1519.
- Jalal, S., et al. 2019. Actin cytoskeleton self-organization in single epithelial cells and fibroblasts under isotropic confinement. *J. Cell Sci.* 132: jcs220780.
- Arnold, J., et al. 2020. Tubulin tyrosine ligase like 4 (TLL4) overexpression in breast cancer cells is associated with brain metastasis and alters exosome biogenesis. *J. Exp. Clin. Cancer Res.* 39: 205.
- Qin, L., et al. 2021. Chlorogenic acid alleviates hyperglycemia-induced cardiac fibrosis through activation of the NO/cGMP/PKG pathway in cardiac fibroblasts. *Mol. Nutr. Food Res.* 65: e2000810.
- Kodama, T., et al. 2022. Eukaryotic elongation factor 2 kinase inhibitor, A484954 inhibits perivascular sympathetic nerve stimulation-induced vasoconstriction in isolated renal artery. *Eur. J. Pharmacol.* 926: 175042.
- Li, Y.J., et al. 2023. Phosphodiesterase type 10A inhibitor attenuates lung fibrosis by targeting myofibroblast activation. *iScience* 26: 106586.
- Wang, Y., et al. 2024. Carvedilol activates a myofilament signaling circuitry to restore cardiac contractility in heart failure. *JACC Basic Transl. Sci.* 9: 982-1001.

## RESEARCH USE

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

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