

Background

Members of the Wiskott-Aldrich syndrome protein (WASP) family regulate the formation of actin-based cell structures in many cell types. These proteins contain C-terminal actin-binding domains that can stimulate actin polymerization. In addition, these proteins bind the ARP2/3 complex, which can nucleate actin polymerization at sites that lead to branched actin structures. WASP is expressed primarily in hematopoietic cells, while its homolog N-WASP is widely expressed. These proteins have 48% identity in human with the highest homology in the functional regions of these proteins. Serine and tyrosine phosphorylation regulates the activity of both proteins. WASP is observed as a 63 kDa protein in hematopoietic cells, while N-WASP is observed as a 65 kDa in many tissues, especially brain.

Background References

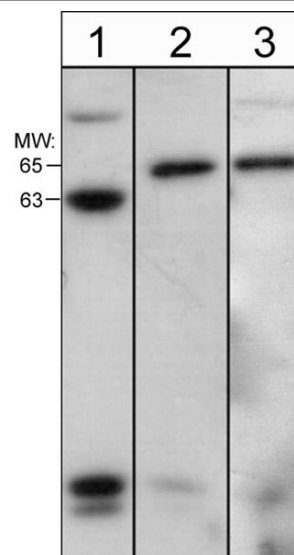
Baba, Y. et al. (1999) *Blood* 93:2003.
 Higgs, H.N. & Pollard, T.D. (2001) *Annu Rev Biochem* 70:649
 Cory, G.O. et al. (2003) *Mol Cell*. 11(5):1229-39.

Product Citations

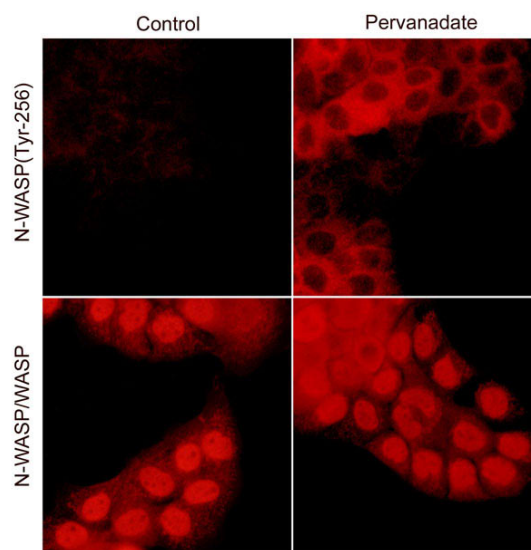
Cao, M. et al. (2017) *Neuron*. 93(4):882.
WB: mouse brain

Park, M. et al. (2013) *J Biol Chem* 288:33324.
WB: human brain microvascular endothelial cells

Cheney, L. et al. (2011) *J Infectious Diseases*. 203:1824.
WB: mouse adipocytes



Western blot analysis of Jurkat (lane 1), A431 (lane 2), and HeLa (lane 3) cell lysates (20 µg/lane). Blots were probed with rabbit polyclonal anti-WASP/N-WASP (WP2101).



Immunocytochemical labeling of N-WASP in control and pervanadate-treated A431 cells. The cells were labeled with rabbit polyclonal N-WASP/WASP (WP2101) or rabbit polyclonal N-WASP (Tyr-256) antibodies, then the antibodies were detected using appropriate secondary antibody conjugated to DyLight® 594.

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Immunogen**Uniprot ID: O00401**

A synthetic peptide (coupled to KLH) corresponding to a region near the C-terminus of human WASP. This sequence is highly homologous with a similar region in human N-WASP.

Buffer and Storage

Rabbit polyclonal, affinity-purified antibody is supplied in 100µl phosphate-buffered saline, 50% glycerol, 1 mg/ml BSA, and 0.05% sodium azide. Store at -20°C. Stable for 1 year.

Applications

WB	1:1000
ELISA	1:2000
ICC	1:100

Species Reactivity

Hu, Rt, Ms

End user should determine optimal dilution for their particular applications and experiments.

Western blot membranes were incubated with diluted antibody in 5% non-fat milk, Tris buffer, 0.04% Tween20 for 1 hour at room temperature.

Abbreviations: E = ELISA, ICC = immunocytochemistry, IHC = immunohistochemistry, IP = immunoprecipitation, MS = mass spectrometry, WB = western blot
Hu = Human, Ms = Mouse, Rt = Rat, Ck = Chicken, F = Frog, B = Bovine

Specificity

This antibody detects a 63 kDa* protein corresponding to the molecular mass of WASP on SDS-PAGE immunoblots of Jurkat cell lysate. In rat brain, A431, and SKN-SH cells, this antibody detects a 65 kDa* protein corresponding to the molecular mass of N-WASP.

*All molecular weights (MW) are confirmed by comparison to MW standards and to western blot mobilities of known proteins with similar MW.

"Native" western blot utilizes non-reducing sample buffer (no mercaptoethanol or SDS), normal SDS-PAGE gel electrophoresis, and no methanol in transfer buffers.

Related Products

WP2401 unphosphorylated N-WASP (Ser-484/Ser-485) Rabbit Polyclonal

WP2201 N-WASP (Ser-484/Ser-485), phospho-specific Rabbit Polyclonal

WP2601 N-WASP (Tyr-256), phospho-specific Rabbit Polyclonal

WP2001 N-WASP Rabbit Polyclonal

WX2005 N-WASP Blocking Peptide

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