#12124 Store at -20°C

WIPI1 Antibody

☑100 µl
(10 western blots)

Cell Signaling TECHNOLOGY®

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New 09/12

For Research Use Only. Not For Use In Diagnostic Procedures.

Entrez-Gene ID #55062
Swiss-Prot Acc. #Q5MNZ9

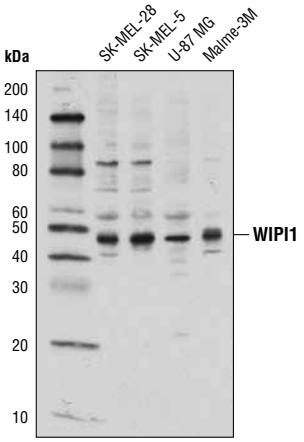
Applications	Species Cross-Reactivity*	Molecular Wt.	Source
W Endogenous	H, (Mk)	48 kDa	Rabbit**

Background: Autophagy is a catabolic process for the autophagosomic-lysosomal degradation of bulk cytoplasmic contents (1,2). It is generally activated by conditions of nutrient deprivation but is also associated with a number of physiological processes including development, differentiation, neurodegeneration, infection, and cancer (3). The molecular machinery of autophagy was largely discovered in yeast and is directed by a number of autophagy-related (Atg) genes.

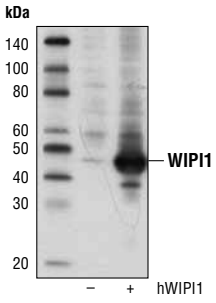
Vacuolar trafficking and autophagy are controlled by the class III type phosphoinositide 3-kinase (PI3K) Vps34, which generates phosphoinositide-3-phosphate (PtdIns3P) (4,5). Atg18 and Atg21 are two related WD-repeat proteins that bind PtdIns3P via a conserved Phe-Arg-Arg-Gly motif (6,7). It has been shown that Atg18 binds to Atg2 and that this complex is directed to vacuolar membranes by its interaction with PtdIns3P (8). Human orthologues of Atg18 and Atg21 were identified as members of the WD-repeat protein Interacting with PhosphoInositides (WIPI) family (9-11). WIPI1 (also called WIPI49) and WIPI2 have been shown to translocate from several vacuolar compartments to LC3-positive autophagosomes during autophagy; this translocation may be used as an autophagy marker (12).

Specificity/Sensitivity: WIPI1 Antibody recognizes endogenous levels of total WIPI1 protein.

Source/Purification: Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Lys369 of human WIPI1 protein. Antibodies are purified by protein A and peptide affinity chromatography.



Western blot analysis of extracts from various cell lines using WIPI1 Antibody.



Western blot analysis of extracts from 293T cells, mock transfected (-) or transfected with a construct expressing human WIPI1 (hWIPI1; +), using WIPI1 Antibody.

Storage: Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at –20°C. *Do not aliquot the antibody.*

***Species cross-reactivity is determined by western blot.**

****Anti-rabbit secondary antibodies must be used to detect this antibody.**

Recommended Antibody Dilutions:
Western blotting 1:1000

For product specific protocols please see the web page for this product at www.cellsignal.com.

Please visit www.cellsignal.com for a complete listing of recommended complementary products.

Background References:

(1) Reggiori, F. and Klionsky, D.J. (2002) *Eukaryot Cell* 1, 11-21.
(2) Codogno, P. and Meijer, A.J. (2005) *Cell Death Differ* 12 Suppl 2, 1509-18.
(3) Levine, B. and Yuan, J. (2005) *J Clin Invest* 115, 2679-88.
(4) Corvera, S. (2001) *Traffic* 2, 859-66.
(5) Yan, Y. and Backer, J.M. (2007) *Biochem Soc Trans* 35, 239-41.
(6) Krick, R. et al. (2006) *FEBS Lett* 580, 4632-8.
(7) Strømhaug, P.E. et al. (2004) *Mol Biol Cell* 15, 3553-66.
(8) Obara, K. et al. (2008) *J Biol Chem* 283, 23972-80.
(9) Jeffries, T.R. et al. (2004) *Mol Biol Cell* 15, 2652-63.
(10) Proikas-Cezanne, T. et al. (2007) *FEBS Lett* 581, 3396-404.
(11) Polson, H.E. et al. (2010) *Autophagy* 6, Epub ahead of print.
(12) Proikas-Cezanne, T. et al. (2007) *FEBS Lett* 581, 3396-404.

IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween-20 at 4°C with gentle shaking, overnight.

Applications Key: **W**—Western **IP**—Immunoprecipitation **IHC**—Immunohistochemistry **ChIP**—Chromatin Immunoprecipitation **IF**—Immunofluorescence **F**—Flow cytometry **E-P**—ELISA-Peptide
Species Cross-Reactivity Key: **H**—human **M**—mouse **R**—rat **Hm**—hamster **Mk**—monkey **Mi**—mink **C**—chicken **Dm**—D. melanogaster **X**—Xenopus **Z**—zebrafish **B**—bovine **Dg**—dog **Pg**—pig **Sc**—S. cerevisiae **Ce**—C. elegans **Hr**—horse **All**—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.