

MTMR3 Antibody

✓ 100 µl
(10 western blots)



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New 12/12

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

Entrez-Gene ID #8897
Swiss-Prot Acc. #Q13615

Applications W Endogenous	Species Cross-Reactivity* H, (Mk)	Molecular Wt. 130–150 kDa	Source Rabbit**
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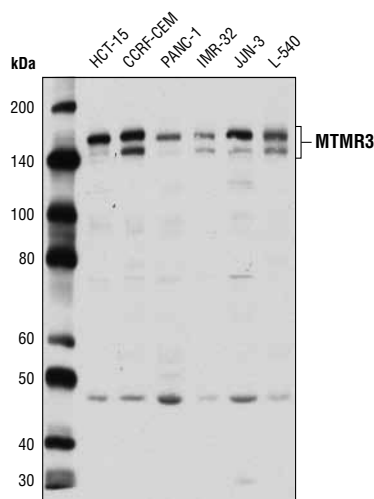
Background: Myotubularin-related proteins are a family of phosphatases with emerging roles in cellular signaling and membrane trafficking (1,2). MTMR3 (Myotubularin-related protein 3), also known as FYVE-DSP1, contains an amino terminal pleckstrin homology (PH) domain and a carboxyl terminal FYVE domain. MTMR3 was first reported as a dual-specific phosphatase, having phosphatase activity toward phosphorylated serine, threonine, and tyrosine residues (3). Subsequent research studies reported that MTMR3 has phosphatase activity toward phosphoinositides, including phosphatidylinositol-3-phosphate (PI3P) and phosphatidylinositol 3,5-bisphosphate (PI(3,5)P₂) (4). Accumulation of PI3P by the class III phosphoinositide 3-kinase Vps34 is a key element in autophagosome formation (5). Inhibition of PI3P by MTMR3 can play an important role in suppressing autophagosome formation (6).

Specificity/Sensitivity: MTMR3 Antibody recognizes endogenous levels of total MTMR3 protein. This antibody also cross-reacts with a protein of unknown origin at 48 kDa.

Source/Purification: Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Pro600 of human MTMR3 protein. Antibodies are purified by protein A and peptide affinity chromatography.

Background References:

- (1) Robinson, F.L. and Dixon, J.E. (2006) *Trends Cell Biol* 16, 403-12.
- (2) Laporte, J. et al. (2002) *Biochem Biophys Res Commun* 291, 305-12.
- (3) Zhao, R. et al. (2000) *Biochem Biophys Res Commun* 270, 222-9.
- (4) Walker, D.M. et al. (2001) *Curr Biol* 11, 1600-5.
- (5) Simonsen, A. and Tooze, S.A. (2009) *J Cell Biol* 186, 773-82.
- (6) Taguchi-Atarashi, N. et al. (2010) *Traffic* 11, 468-78.



Western blot analysis of extracts from various cell lines using MTMR3 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.

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.