Revision 1

Store at -20C

#13492

Atg101 (E1Z4W) Rabbit mAb

Cell Signaling TECHNOLOGY®

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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W	H M R Mk	Endogenous	25	Rabbit IgG	#Q9BSB4	60673

Product Usage Information

Application	Dilution
Western Blotting	1:1000

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at –20°C. Do not aliquot the antibody.

Specificity/Sensitivity

Atg101 (E1Z4W) Rabbit mAb recognizes endogenous levels of total Atg101 protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Val177 of human Atg101 protein.

Background

Atg101 was discovered as a binding protein for Atg13, a component of the ULK1 serine-threonine kinase complex required for autophagy (1-3). Autophagy is a catabolic process for the autophagosomic-lysosomal degradation of bulk cytoplasmic contents (4,5). 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 (6). The molecular machinery of autophagy was largely discovered in yeast and is directed by a number of autophagy-related (Atg) genes. The ULK1 complex includes both Atg13 and FIP200 and is required for starvation-induced autophagy (7-9). Interaction between Atg101 and Atg13 can be important for the stability and basal phosphorylation of Atg13 and ULK1 (1,2).

Background References

1. Mercer, C.A. et al. (2009) *Autophagy* 5, 649-62.
2. Hosokawa, N. et al. (2009) *Autophagy* 5, 973-9.
3. Chan, E.Y. et al. (2007) *J Biol Chem* 282, 25464-74.
4. Reggiori, F. and Klionsky, D.J. (2002) *Eukaryot Cell* 1, 11-21.
5. Codogno, P. and Meijer, A.J. (2005) *Cell Death Differ* 12 Suppl 2, 1509-18.
6. Levine, B. and Yuan, J. (2005) *J Clin Invest* 115, 2679-88.
7. Hosokawa, N. et al. (2009) *Mol Biol Cell* 20, 1981-91.
8. Jung, C.H. et al. (2009) *Mol Biol Cell* 20, 1992-2003.
9. Ganley, I.G. et al. (2009) *J Biol Chem* 284, 12297-305.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

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

Applications Key

W: Western Blotting

Cross-Reactivity Key

H: Human **M:** Mouse **R:** Rat **Mk:** Monkey

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Limited Uses

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