Revision 1

Store at -20C

#5320

UVRAG Antibody

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, IP	H M	Endogenous	90	Rabbit	#Q9P2Y5	7405

Product Usage Information

Application	Dilution
Western Blotting	1:1000
Immunoprecipitation	1:50

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.

Specificity/Sensitivity

UVRAG Antibody detects endogenous levels of total UVRAG protein.

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to a region surrounding Leu555 of human UVRAG. Antibodies are purified by protein A and peptide affinity chromatography.

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 has also been 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 referred to as autophagy-related (Atg) genes. These proteins are involved in the formation of cytoplasmic vacuoles called autophagosomes that are delivered to lysosomes for degradation.The class III type phosphoinositide 3-kinase (PI3KC3)/Vps34 regulates vacuolar trafficking as well as autophagy (4,5). Multiple proteins have been shown to be associated with Vsp34, including: p105/Vsp15, Beclin-1, UVRAG, Atg14, and Rubicon, which can determine Vsp34 function (6-11). UVRAG (UV radiation resistance-associated gene) is associated with the Beclin-1/PI3KC3 complex and promotes PI3KC3 enzymatic activity and autophagy, while suppressing proliferation (11). Beclin-1 binding to UVRAG promotes both autophagosome maturation and endocytic trafficking (6). UVRAG is also a potential tumor suppressor protein with frameshift mutations observed in colon and gastric carcinomas (12,13).

Background References

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2. Codogno, P. and Meijer, A.J. (2005) *Cell Death Differ* 12 Suppl 2, 1509-18.
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4. Corvera, S. (2001) *Traffic* 2, 859-66.
5. Stack, J.H. et al. (1995) *J Cell Biol* 129, 321-34.
6. Liang, C. et al. (2008) *Nat Cell Biol* 10, 776-87.
7. Matsunaga, K. et al. (2009) *Nat Cell Biol* 11, 385-96.
8. Zhong, Y. et al. (2009) *Nat Cell Biol* 11, 468-76.
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12. Ionov, Y. et al. (2004) *Oncogene* 23, 639-45.
13. Kim, M.S. et al. (2008) *Hum Pathol* 39, 1059-63.

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 BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting **IP:** Immunoprecipitation

Cross-Reactivity Key

H: Human **M:** Mouse

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