

#35055 Store at -20°C

AUP1 (D5M9Q) Rabbit mAb**Cell Signaling**
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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:
WB, IP	H M R	Endogenous	42	Rabbit IgG	#Q9Y679	550

Product Usage Information**Application**Western Blotting
Immunoprecipitation**Dilution**1:1000
1:50**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

AUP1 (D5M9Q) Rabbit mAb recognizes endogenous levels of total AUP1 protein.

Species predicted to react based on 100% sequence homology:

Bovine

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Gln320 of human AUP1 protein, long isoform.

Background

Ancient ubiquitous protein 1 (AUP1) is a component of the ER-associated protein degradation (ERAD) machinery responsible for the ubiquitin-mediated degradation of misfolded proteins (1). AUP1 protein contains four conserved domains, with a long, amino-terminal stretch of hydrophobic amino acids followed by an acyltransferase domain (2). Amino-terminal protein sequences direct localization of AUP1 to both the ER and to cytosolic lipid droplets (3). The AUP1 CUE domain binds ubiquitin (4), while the G2BR domain allows for association between AUP1 and E2 conjugating enzyme UBE2G2 (5,6). The presence of these binding domains suggests a central role for AUP1 in the ubiquitination-mediated protein degradation (2). Research studies indicate that AUP1 recruits UBE2G2 to cytosolic lipid droplets, ER-derived organelles that are sites for storage and hydrolysis of neutral lipids. Inhibition of AUP1 protein function results in decreased ubiquitin-mediated degradation of several proteins, including the cholesterol biosynthetic enzyme HMG-CoA-reductase and the cholesterol synthesis regulator INSIG1 (6).

Background References

- Mueller, B. et al. (2008) *Proc Natl Acad Sci U S A* 105, 12325-30.
- Spandl, J. et al. (2011) *J Biol Chem* 286, 5599-606.
- Stevanovic, A. and Thiele, C. (2013) *J Lipid Res* 54, 503-13.
- Lohmann, D. et al. (2013) *PLoS One* 8, e72453.
- Klemm, E.J. et al. (2011) *J Biol Chem* 286, 37602-14.
- Jo, Y. et al. (2013) *Mol Biol Cell* 24, 169-83.

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**WB:** Western Blotting **IP:** Immunoprecipitation**Cross-Reactivity Key**

H: human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **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
GP: Guinea Pig **Rab:** rabbit **All:** all species expected

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