

#63182 Store at -20C

UBE2G2 (D8Z4G) Rabbit mAb


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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
WB	H M R Mk	Endogenous	19	Rabbit IgG	#P60604	7327

Product Usage Information

Application

Western Blotting

Dilution

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

UBE2G2 (D8Z4G) Rabbit mAb recognizes endogenous levels of total UBE2G2 protein. This antibody does not cross-react with UBE2G1 protein.

Species predicted to react based on 100% sequence homology:

Bovine, Pig

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues near the carboxy terminus of human UBE2G2 protein.

Background

Ubiquitin (Ub) is a conserved polypeptide that is covalently linked to many cellular proteins through the process of ubiquitination, which targets proteins for degradation by the 26S proteasome. Three enzymatic components are involved in the protein ubiquitination cascade. Ubiquitin is first activated by forming a thioester complex with an E1 ubiquitin-activating enzyme. Activated ubiquitin is subsequently transferred to an E2 ubiquitin-carrier protein, and then from the E2 to an E3 ubiquitin ligase for final delivery to the ε-amino group of the target protein lysine residue (1-3).

The ubiquitin-conjugating enzyme E2 G2 (UBE2G2, UBC7) is a ubiquitously expressed E2 enzyme and critical component of the endoplasmic reticulum-associated degradation pathway (ERAD) (4). Research studies demonstrate that UBE2G2 forms homodimers and preassembles K48-linked poly-Ub chains at its active site (5-8). The association of Ub-charged UBE2G2 molecules with the ER-resident E3 ligase AMFR (gp78) is required for Ub chain transfer and efficient removal of misfolded or aggregated proteins through the ERAD pathway (9,10).

Background References

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2. Hochstrasser, M. (2000) *Nat Cell Biol* 2, E153-7.
3. Hochstrasser, M. (2000) *Science* 289, 563-4.
4. Katsanis, N. and Fisher, E.M. (1998) *Genomics* 51, 128-31.
5. Bazirgan, O.A. and Hampton, R.Y. (2008) *J Biol Chem* 283, 12797-810.
6. Ravid, T. and Hochstrasser, M. (2007) *Nat Cell Biol* 9, 422-7.
7. Liu, W. et al. (2014) *EMBO J* 33, 46-61.
8. Li, W. et al. (2007) *Nature* 446, 333-7.
9. Li, W. et al. (2009) *Proc Natl Acad Sci U S A* 106, 3722-7.
10. Chen, B. et al. (2006) *Proc Natl Acad Sci U S A* 103, 341-6.

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

WB: Western Blotting

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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