

#2775 Store at -20C

LC3B Antibody



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

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source:	UniProt ID:	Entrez-Gene Id:
WB, W-S	H M R	Endogenous	14, 16	Rabbit	#Q9GZQ8	81631

Product Usage Information	Application Western Blotting Simple Western™	Dilution 1:1000 1:10 - 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	LC3B detects endogenous levels of total LC3B protein. Cross-reactivity may exist with other LC3 isoforms. Stronger reactivity is observed with the type II form of LC3B.	
Species predicted to react based on 100% sequence homology:	Monkey, Bovine, Pig	
Source / Purification	Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues near the amino terminus of LC3B. Antibodies were purified by peptide affinity chromatography.	
Background	Autophagy is a catabolic process for the autophagosomic-lysosomal degradation of bulk cytoplasmic contents (1,2). Autophagy is generally activated by conditions of nutrient deprivation, but it has also been associated with a number of physiological processes including development, differentiation, neurodegenerative diseases, infection, and cancer (3). Autophagy marker Light Chain 3 (LC3) was originally identified as a subunit of microtubule-associated proteins 1A and 1B (termed MAP1LC3) (4) and subsequently found to contain similarity to the yeast protein Apg8/Aut7/Cvt5 critical for autophagy (5). Three human LC3 isoforms (LC3A, LC3B, and LC3C) undergo posttranslational modifications during autophagy (6-9). Cleavage of LC3 at the carboxy terminus immediately following synthesis yields the cytosolic LC3-I form. During autophagy, LC3-I is converted to LC3-II through lipidation by a ubiquitin-like system involving Atg7 and Atg3 that allows for LC3 to become associated with autophagic vesicles (6-10). The presence of LC3 in autophagosomes and the conversion of LC3 to the lower migrating form, LC3-II, have been used as indicators of autophagy (11).	
Background References	1. Reggiori, F. and Klionsky, D.J. (2002) <i>Eukaryot. Cell</i> 1, 11-21. 2. Codogno, P. and Meijer, A.J. (2005) <i>Cell Death Differ.</i> 12 Suppl 2, 1509-18. 3. Levine, B. and Yuan, J. (2005) <i>J. Clin. Invest.</i> 115, 2679-88. 4. Mann, S.S. and Hammarback, J.A. (1994) <i>J. Biol. Chem.</i> 269, 11492-97. 5. Lang, T. et al. (1998) <i>EMBO J.</i> 17, 3597-607. 6. Kabeya, Y. et al. (2000) <i>EMBO J.</i> 19, 5720-28. 7. He, H. et al. (2003) <i>J. Biol. Chem.</i> 278, 29278-87. 8. Tanida, I. et al. (2004) <i>J. Biol. Chem.</i> 279, 47704-10. 9. Wu, J. et al. (2006) <i>Biochem. Biophys. Res. Commun.</i> 339, 437-42. 10. Ichimura, Y. et al. (2000) <i>Nature</i> 408, 488-92. 11. Kabeya, Y. et al. (2004) <i>J. Cell Sci.</i> 117, 2805-12.	

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 W-S: Simple Western™

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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