

#3525 Store at -20°C

UCLH3 Antibody


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

Applications: WB	Reactivity: H M R Mk	Sensitivity: Endogenous	MW (kDa): 27	Source: Rabbit	UniProt ID: #P15374	Entrez-Gene Id: 7347
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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 and 50% glycerol. Store at –20°C. Do not aliquot the antibody.	
Specificity / Sensitivity	UCLH3 Antibody detects endogenous levels of total UCLH3 protein.	
Source / Purification	Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Leu220 of human UCLH3 protein. Antibodies are purified by peptide affinity chromatography.	
Background	<p>Protein ubiquitination and deubiquitination are reversible processes catalyzed by ubiquitinating enzymes (UBEs) and deubiquitinating enzymes (DUBs) (1,2). DUBs are categorized into 5 subfamilies: USP, UCH, OTU, MJD, and JAMM. UCHL1, UCHL3, UCHL5/UCH37, and BRCA-1-associated protein-1 (BAP1) belong to the UCH family of DUBs, which all possess a conserved catalytic domain (UCH domain) of about 230 amino acids. UCHL5 and BAP1 have unique extended C-terminal tails. UCHL1 is abundantly expressed in neuronal tissues and testes, while UCHL3 expression is more widely distributed (3,4). Although UCHL1 and UCHL3 are the most closely related UCH family members with about 53% identity, their biochemical properties differ in that UCHL1 binds monoubiquitin and UCHL3 shows dual specificity toward both ubiquitin (Ub) and NEDD8, a Ub-like molecule. In particular, UCHL3 functions as a Ub hydrolase involved in the processing of both Ub precursors and ubiquitinated substrates, generating free monomeric Ub. This is accomplished through the ability of UCHL3 to recognize and hydrolyze isopeptide bonds at the C-terminal glycine of either Ub or NEDD8 (5-7). Recent functional studies have identified UCH-L3 as a critical regulator of adipogenesis through its ability to promote IGF-IR and insulin receptor signaling (8). Furthermore, UCHL3 has been shown to promote deubiquitination, recycling, and cell surface expression of the epithelial sodium channel (9).</p>	
Background References	<ol style="list-style-type: none"> 1. Nijman, S.M. et al. (2005) <i>Cell</i> 123, 773-86. 2. Nalepa, G. et al. (2006) <i>Nat Rev Drug Discov</i> 5, 596-613. 3. Leroy, E. et al. (1998) <i>Nature</i> 395, 451-2. 4. Kurihara, L.J. et al. (2001) <i>Hum Mol Genet</i> 10, 1963-70. 5. Osaka, H. et al. (2003) <i>Hum Mol Genet</i> 12, 1945-58. 6. Wada, H. et al. (1998) <i>Biochem Biophys Res Commun</i> 251, 688-92. 7. Kwon, J. (2007) <i>Exp Anim</i> 56, 71-7. 8. Suzuki, M. et al. (2009) <i>Endocrinology</i> 150, 5230-9. 9. Butterworth, M.B. et al. (2007) <i>J Biol Chem</i> 282, 37885-93. 	

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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