



## UCHL1 Polyclonal Antibody

E92131

**Catalog Number:** E92131**Amount:** 100ul

**Background:** 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).

**Species:** Rabbit**Isotype:** IgG

**Storage/Stability:** Store at -20oC or -80oC. Avoid freeze / thaw cycles. Buffer: PBS with 0.02% sodium azide, 50% glycerol, pH7.3.

**Synonyms:** PARK5; PGP9.5; Uch-L1;**Immunogen:** Recombinant protein of human UCHL1**Purification:** Affinity purification**Reactivity:** H M R**Applications:** WB IHC**Molecular Weight:** 25kDa**Swiss-Prot No.:** P09936**Gene ID:** 7345

**References:** 1. Nijman, S.M. et al. (2005) Cell 123, 773-86. 2. Nalepa, G. et al. (2006) Nat Rev Drug Discov 5, 596-613. 3. Leroy, E. et al. (1998) Nature 395, 451-2. 4. Kurihara, L.J. et al. (2001) Hum Mol Genet 10, 1963-70. 5. Osaka, H. et al. (2003) Hum Mol Genet 12, 1945-58. 6. Wada, H. et al. (1998) Biochem Biophys Res Commun 251, 688-92. 7. Kwon, J. (2007) Exp Anim 56, 71-7. 8. Suzuki, M. et al. (2009) Endocrinology 150, 5230-9. 9. Butterworth, M.B. et al. (2007) J Biol Chem 282, 37885-93.

