

Orders: 877-616-CELL (2355)
orders@cellsignal.com

Support: 877-678-TECH (8324)

Web: info@cellsignal.com
cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

#3525 Store at -20C

UCHL3 Antibody

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

Applications: W	Reactivity: H M R Mk	Sensitivity: Endogenous	MW (kDa): 27	Source/Isotype: Rabbit	UniProt ID: #P15374	Entrez-Gene Id: 7347
---------------------------	--------------------------------	-----------------------------------	------------------------	----------------------------------	-------------------------------	--------------------------------

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

UCHL3 Antibody detects endogenous levels of total UCHL3 protein.

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Leu220 of human UCHL3 protein. Antibodies are purified by peptide affinity chromatography.

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-1R and insulin receptor signaling (8). Furthermore, UCHL3 has been shown to promote deubiquitination, recycling, and cell surface expression of the epithelial sodium channel (9).

Background 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.

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

W: Western Blotting

Cross-Reactivity Key

H: Human **M:** Mouse **R:** Rat **Mk:** Monkey

Trademarks and Patents

Cell Signaling Technology is a trademark of Cell Signaling Technology, Inc.

All other trademarks are the property of their respective owners. Visit cellsignal.com/trademarks for more information.

Limited Uses

Except as otherwise expressly agreed in a writing signed by a legally authorized representative of CST, the following terms apply to Products provided by CST, its affiliates or its distributors. Any Customer's terms and conditions that are in addition to, or different from, those contained herein, unless separately accepted in writing by a legally authorized representative of CST, are rejected and are of no force or effect.

Products are labeled with For Research Use Only or a similar labeling statement and have not been approved, cleared, or licensed by the FDA or other regulatory foreign or domestic entity, for any purpose. Customer shall not use any Product for any diagnostic or therapeutic purpose, or otherwise in any manner that conflicts with its labeling statement. Products sold or licensed by CST are provided for Customer as the end-user and solely for research and development uses. Any use of Product for diagnostic, prophylactic or therapeutic purposes, or any purchase of Product for resale (alone or as a component) or other commercial purpose, requires a separate license from CST. Customer shall (a) not sell, license, loan, donate or otherwise transfer or make available any Product to any third party, whether alone or in combination with other materials, or use the Products to manufacture any commercial products, (b) not copy, modify, reverse engineer, decompile, disassemble or otherwise attempt to discover the underlying structure or technology of the Products, or use the Products for the purpose of developing any products or services that would compete with CST products or services, (c) not alter or remove from the Products any trademarks, trade names, logos, patent or copyright notices or markings, (d) use the Products solely in accordance with CST Product Terms of Sale and any applicable documentation, and (e) comply with any license, terms of service or similar agreement with respect to any third party products or services used by Customer in connection with the Products.