10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

UCHL3 Rabbit pAb

Catalog # AP99791

Product Information

Application	IHC-P, IHC-F, IF
Primary Accession	P15374
Other Accession	P15374
Reactivity	Rat
Predicted	Human, Mouse, Chicken
Host	Rabbit
Clonality	Polyclonal
Calculated MW	26183
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human UCHL3
Epitope Specificity	133-230/230
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Belongs to the peptidase C12 family.
SUBUNIT	Preferentially binds diubiquitin; the interaction does not hydrolyze diubiquitin but, in vitro, inhibits the hydrolyzing activity on other substrates.
Post-translational modifications	Phosphorylated upon DNA damage, probably by ATM or ATR.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	UCH-L1 is a member of a gene family whose products hydrolyze small C-terminal adducts of ubiquitin to generate the ubiquitin monomer. Expression of UCH-L1 is highly specific to neurons and to cells of the diffuse neuroendocrine system and their tumors. UCH-L1 is expressed in brain neurons. Examination of specific brain regions reveals expression in all areas tested, particularly in the substantia nigra. UCH-L1 represents 1 to 2% of total soluble brain protein. Its occurrence in Lewy bodies and its function in the proteasome pathway make it a compelling candidate gene in Parkinson disease. The gene which encodes UCH-L1 maps to human chromosome 4p14. The 230 amino acid human UCH-L3 protein is 54% identical to that of UCH-L1. UCH-L3 is the predominant thiol protease and has high-affinity binding sites for ubiquitin.

Additional Information

Gene ID	7347
Other Names	UCH-L3; RGD1561196; UCHL3_HUMAN; UCHL3; Ubiquitin thioesterase L3; 3.4.19.12; UCHL3_MOUSE; UCHL3_RAT; ubiquitin C-terminal hydrolase L3; ubiquitin carboxyl-terminal esterase L3 (ubiquitin thiolesterase); ubiquitin thiolesterase

Dilution	IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	UCHL3 {ECO:0000303|PubMed:19047059, ECO:0000312|HGNC:HGNC:12515}
Function	Deubiquitinating enzyme (DUB) that controls levels of cellular ubiquitin through processing of ubiquitin precursors and ubiquitinated proteins (PubMed:19154770, PubMed:21762696, PubMed:22689415, PubMed:2530630). Thiol protease that recognizes and hydrolyzes a peptide bond at the C-terminal glycine of either ubiquitin or NEDD8 (PubMed:19154770, PubMed:21762696, PubMed:22689415, PubMed:2530630, PubMed:9790970). Has a 10-fold preference for Arg and Lys at position P3'', and exhibits a preference towards 'Lys-48'-linked ubiquitin chains (PubMed:19154770, PubMed:21762696, PubMed:22689415, PubMed:2530630). Can hydrolyze UBB(+1), a mutated form of ubiquitin which is not effectively degraded by the proteasome and is associated with neurodegenerative disorders (By similarity). Involved in DNA repair via homologous recombination (HR) by mediating deubiquitination of RAD51 in response to DNA damage, promoting interaction between RAD51 and BRCA2 (PubMed:27941124). Deubiquitinates ENAC in apical compartments, thereby regulating apical membrane recycling (By similarity). Indirectly increases the phosphorylation of IGFIR, AKT and FOXO1 and promotes insulin-signaling and insulin-induced adipogenesis (By similarity). Required for stress-response retinal, skeletal muscle and germ cell maintenance (By similarity). May be involved in working memory (By similarity).
Cellular Location	Cytoplasm.
Tissue Location	Highly expressed in heart, skeletal muscle, and testis.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.