Data Sheet (Cat.No.TMPY-02332)

TargetMol

UCHL3 Protein, Rat, Recombinant (His)

General Information

Synonyms:	ubiquitin carboxyl-terminal esterase L3 (ubiquitin thiolesterase)
Protein Construction:	A DNA sequence encoding the rat UCHL3 (Q91Y78) (Glu 2-Ala 230) was fused with a polyhistidine tag at the N-terminus. Predicted N terminal: Met
Species:	Rat
Expression Host:	E. coli
Accession:	Q91Y78
Molecular Weight:	27.5 kDa (predicted); 28 kDa (reducing conditions)

QC Testing

Biological Activity:	Measured by the hydrolysis of UbiquitinAMC. The specific activity is >14000 pmoles/min/μg.
Purity:	> 95 % as determined by SDS-PAGE
Endotoxin:	Please contact us for more information.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

Ubiquitin carboxyl-terminal hydrolase isozyme L3, also known as UCH-L3, Ubiquitin thioesterase L3 and UCHL3, is a ubiquitin-protein hydrolase that belongs to the peptidase C12 family. It is involved both in the processing of ubiquitin precursors and of ubiquitinated proteins. This enzyme is a thiol protease that recognizes and hydrolyzes a peptide bond at the C-terminal glycine of either ubiquitin or NEDD8. UCHL3 is highly expressed in heart, skeletal muscle, and testis. UCHL1 and UCHL3 are two of the deubiquitinating enzymes expressed in the brain. These

phenotypes indicate the importance of UCHL1 and UCHL3 in the regulation of the central nervous system. UCHL3 functions as a de-ubiquitinating enzyme where lack of its hydrolase activity may result in the prominent accumulation of ubiquitinated proteins and subsequent induction of stress responses in skeletal muscle. UCHL3 has also been identified as a tumor-specific antigen in colon cancer.

Reference

Wood,M.A. et al., 2005, Hippocampus 15 (5):610-21.
Kwon,J. et al., 2006, Exp Anim 55 (1):35-43.
Setsuie,R. et al., 2009, Neurochem Int 54 (5-6):314-21.
Setsuie,R. et al., 2010, Neurochem Int 56 (8):911-8.