
MATERIAL DATA SHEET

USP14, human recombinant**Cat. # E- 544**

USP14 (Ubiquitin Specific Protease 14) is the human homolog of the yeast Ubp6 protein and is member a of the family of thiol proteases involved in the hydrolysis of ubiquitin C-terminal protein derivatives. It has been reported to have a low-affinity association with the proteasome (PA700, 19S cap particle), which increases its basal enzyme activity. The primary physiological role of USP14 may be the release of ubiquitin from proteasome-bound conjugates. *In vitro*, the enzyme has a low affinity for ubiquitin and is unable to disassemble poly-ubiquitin protein conjugates. Mice homozygous for spontaneous USP14 mutations develop ataxia and this enzyme may play an important role in regulating synaptic activity in mammals. USP14 may also have a role in colorectal cancer metastases, possibly controlling the fate of proteins that regulate tumor invasion. Accession # NP_005142.

Product Information	
Quantity:	25 µg
Stock:	X mg/ml (X µM) in 50 mM HEPES pH 8.0, 50mM NaCl, 5mM DTT, 1mM EDTA. Actual concentration varies with specific Lot #.
MW:	56 kDa
Purity:	> 95% by SDS-PAGE

Use & Storage	
Use:	Activity was measured using 18 µM Enzyme, 4 µM Ub-AMC in 100mM Hepes pH8.5, 10mM DTT and 5% glycerol at 25°C. Under these conditions RFU/min/µg = 2.0
Storage:	Store at -80°C. Avoid multiple freeze/thaw cycles.

Literature	
References:	Anderson C., <i>et al</i> (2005) <u>J.Neurochem.</u> 95 :724-731 Leggett D.S., <i>et a.</i> (2002) <u>Mol. Cell.</u> 10 :495-507 Hu M., <i>et al</i> (2002) <u>EMBO.J.</u> 24 :3747-3756 Park K.C., <i>et al</i> (1997) <u>Arch. Biochem. Biophys.</u> 347 :78-84 Shinji S., <i>et a</i> (2006) <u>Oncol.Rep.</u> 15 :539-543 Wilkinson K.D., <i>et al.</i> (2001) <u>EMBO. J.</u> 20 :5187-5196 Wilson S.M., <i>et al</i> (2002) <u>Nat. Genet.</u> 32 :420-425 Yin L., <i>et al</i> (2000) <u>Biochem.</u> 39 :100001-100010

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