

**MATERIAL DATA SHEET****USP10, human recombinant****Cat. # E-592**

Ubiquitin carboxyl-terminal hydrolase 10 (USP10) is a specialized cysteine protease with a predicted molecular weight of 87 kDa. USP10 is a member of the peptidase C19 family and the human protein shares 83% amino acid sequence identity with its mouse ortholog. Reported USP10 targets include p53, BECN1, SNX3 and CFTR. USP10 translocates to the nucleus in response to DNA damage and deubiquitinates p53, thus regulating the p53-dependent DNA damage response. USP10 deubiquitination of BECN1 leads to stabilization of PIK3C3/VPS34-containing complexes which drives autophagy. The small molecule Spautin-1 exerts its potent inhibitory effects on autophagy partially through the inhibition of USP10 activity. This recombinant protein contains a C-terminal 6-His tag.

**Product Information**

<b>Quantity:</b>	50 µg
<b>Stock:</b>	X mg/ml (X µM) in 50 mM HEPES pH 7.5, 100 mM NaCl, 10% (v/v) Glycerol, 1 mM TCEP
<b>MW:</b>	88 kDa
<b>Purity:</b>	≥ 90% by SDS-PAGE under reducing conditions and visualized by Colloidal Coomassie Blue Stain.

**Use & Storage**

<b>Use:</b>	Reaction conditions will need to be optimized for each specific application. We recommend an initial recombinant human USP10 concentration of 50-100 nM when using Ubiquitin-AMC or Ubiquitin-Rh110 substrates ( <b>U-550, U-555</b> )
<b>Storage:</b>	Store at -80°C. Avoid multiple freeze/thaw cycles.

**Literature**

<b>References:</b>	Boulkroun S., <i>et al.</i> (2008) <i>Am. J. Physiol.</i> <b>295</b> :F889-F900 Liu J., <i>et al.</i> (2011) <i>Cell</i> <b>147</b> : 223 Yuan J., <i>et al.</i> (2010) <i>Cell</i> <b>140</b> : 384
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