

Lot # XXXXX

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MATERIAL DATA SHEET

USP12, human recombinant

Cat. # E-578

Ubiquitin carboxyl-terminal hydrolase 12 (USP12) is a specialized cysteine protease with a predicted molecular weight of 43 kDa. USP12 is a member of the peptidase C19 family and USP12/USP46 subfamily, and the human protein shares 98% amino acid sequence identity with its mouse ortholog. Like USP1 and USP46, USP12 lacks appreciable activity in the absence of its co-activator UAF1. Addition of UAF1 increases the *in vitro* activity of USP12 20-fold or more. WDR20 is often found in complex with both USP12 and UAF1, and the ternary complex is reported to be more active than the USP12/UAF1 complex. Biologically, USP12 has been implicated as a positive regulator of Androgen Receptor (AR) activity via a mechanism that involves down-regulation of Akt activity. As such, it has been proposed that USP12 inhibition could offer a therapeutic target for some forms of prostate cancer. This recombinant protein contains a C-terminal 6-His tag.

Product Information

Quantity:	50 µg
Stock:	X mg/ml (X µM) in 50 mM HEPES pH 8.2, 200 mM NaCl, 10% (v/v) Glycerol, 2 mM TCEP
MW:	44 kDa
Purity:	≥ 95% by SDS-PAGE under reducing conditions and visualized by Colloidal Coomassie Blue Stain.

Use & Storage

Use:	Reaction conditions will need to be optimized for each specific application. We recommend an initial recombinant human USP12 concentration of 50-500 nM. Requires a 1:1 stoichiometric amount of UAF1 (E-566) for activity when using Ubiquitin-AMC or Ubiquitin-Rhodamine (U-550, U-555) as a substrate. <i>In vitro</i> , The USP12/UAF1 complex will not efficiently hydrolyze poly-Ubiquitin chains in the absence of WDR20.
Storage:	Store at -80°C. Avoid multiple freeze/thaw cycles.

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Literature

- References:**
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 - McClurg, U.L. *et al.* (2014) Oncotarget **5**: 7081
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