

DESCRIPTION

Source *Spodoptera frugiperda*, Sf 21 (baculovirus)-derived human UAF1 protein
Met1 - Thr677 with a C-terminal 6-His tag
Accession # Q8TAF3.1

Predicted Molecular Mass 77 kDa

SPECIFICATIONS

Activity Reaction conditions will need to be optimized for each specific application. We recommend an initial Recombinant Human UAF1 concentration equal to the concentration of deconjugating enzyme present (1:1 stoichiometry) in *in vitro* deconjugation reactions utilizing Ubiquitin-AMC.

Purity >90%, by SDS-PAGE under reducing conditions and visualized by Colloidal Coomassie® Blue stain.

Formulation Supplied as a 0.2 µm filtered solution in HEPES, NaCl, TCEP and Glycerol. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Shipping The product is shipped with dry ice or equivalent. Upon receipt, store it immediately at the temperature recommended below.

Stability & Storage Use a manual defrost freezer and avoid repeated freeze-thaw cycles.

- 6 months from date of receipt, -70 °C as supplied.
- 3 months, -70 °C under sterile conditions after opening.

BACKGROUND

UAF1 (USP1-Associated Factor 1, also known as WD Repeat-containing protein 48 or WDR48) is a positive regulator of at least three deubiquitinating enzymes of the C19 peptidase family including USP1, USP12, and USP46. In the absence of UAF1, all three of these deubiquitinases are almost completely inactive, and available biochemical evidence suggests UAF1 activation occurs by increasing catalytic turnover as opposed to altered substrate affinity (at least in the case of UAF1/USP1) of the enzymes. Most notably, UAF1 strongly activates USP1 deubiquitination of monoubiquitinated FANCD2 and PCNA, thereby playing important roles in DNA damage response and translesion synthesis. The UAF1/USP12 complex has recently been described as a negative regulator of Notch signaling. Disruption of UAF1-dependent USP12 activity interrupts Notch trafficking to the lysosomes, leading to an increased amount of receptor at the cell surface and to higher Notch activity. At the biochemical level, UAF1/USP12 deubiquitinates the non-activated form of Notch in cell culture and *in vitro*.

References:

1. Cohn, M.A., *et al.* (2009) J. Biol. Chem. **284**:5343.
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3. Joo, H-Y., *et al.* (2011) J. Biol. Chem. **286**:7190.
4. Moretti, J., *et al.* (2012) J. Biol. Chem. **287**:29429.
5. Williams, S.A., *et al.* (2011) Cell **146**:918.