
MATERIAL DATA SHEET

Recombinant Human His6 USP46/UAF1 Complex**Cat. # E-586**

Ubiquitin carboxyl-terminal hydrolase 46 (USP46) is a specialized cysteine protease with a predicted molecular weight of 42 kDa. USP46 is a member of the peptidase C19 family and USP12/USP46 subfamily, and the human protein shares 100% amino acid sequence identity with its mouse ortholog. Like USP1 and USP12, USP46 lacks appreciable activity in the absence of its co-activator UAF1. Addition of UAF1 increases the *in vitro* activity of USP46 10-fold or more. Biologically, USP46 has been implicated in the regulation of Alpha-Amino-3-hydroxy-5-methyl-isoxazole-4-propionic acid receptors (AMPARs). USP46 is able to deubiquitinate AMPARs both *in vivo* and *in vitro*, and by regulating the status of AMPAR ubiquitination and turnover, this deubiquitinase may play an important role in synaptic plasticity and brain function. Recombinant USP46 contains a C-terminal 6-His tag. Recombinant UAF1 also contains a C-terminal 6-His tag. The assembled complex contains 25 µg USP46 and 45 µg UAF1, resulting in a 1:1 stoichiometry.

Product Information

Quantity:	70 µg
MW:	43 kDa (USP46), 77 kDa (UAF1)
Source:	<i>Spodoptera frugiperda</i> , Sf21 (baculovirus)-derived Contains a C-terminal 6-His tag Accession # P62068 (USP46), Q8TAF3 (UAF1)
Stock:	X mg/ml (X µM) in 50 mM HEPES pH 7.8, 100 mM NaCl, 10% (v/v) Glycerol, 1 mM TCEP
Purity:	>95%, by SDS-PAGE under reducing conditions and visualized by Colloidal Coomassie® Blue stain.

Use & Storage

Use: Recombinant Human USP46/UAF1 complex is a Ubiquitin-specific deconjugating enzyme heterodimer. Reaction conditions will need to be optimized for each specific application. We recommend an initial USP46/UAF1 Complex concentration of 20-200 nM when using Ubiquitin-AMC or Ubiquitin-Rhodamine (**U-550, U-555**) as a substrate. *In vitro*, USP46/UAF1 complex does not efficiently hydrolyze poly-Ubiquitin chains in the absence of WDR20.

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

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

Literature

References:

1. Cohn, M.A. *et al.* (2009) J Biol Chem. **284**: 5343
2. Huo, Y. *et al.* (2015) J Neurochem. doi: 10.1111/jnc.13194.
3. Ohashi, M. *et al.* (2015) PLoS Pathog. DOI: 10.1371/journal.ppat.1004822

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