

Ubiquitin-Aldehyde

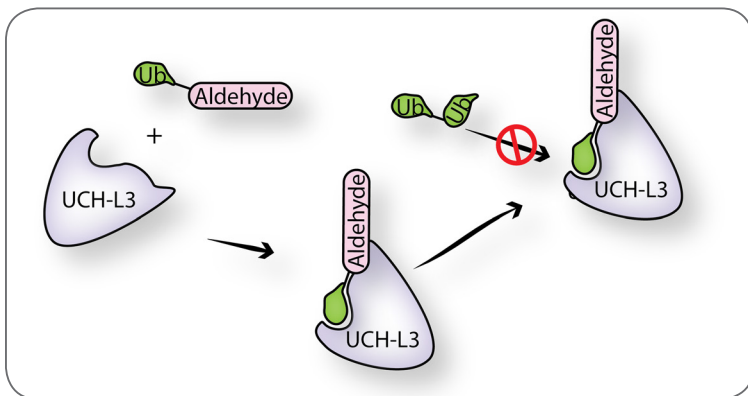
Cat. No. SBB-PS0031
Lot. No. 172440031



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Ubiquitin-Aldehyde

Ubiquitin is a small (8.5 kDa) regulatory protein that has been found in almost all tissues of eukaryotic organisms. The addition of ubiquitin to a substrate protein is called ubiquitination or ubiquitylation. Ubiquitination can affect proteins in many ways; it can signal for their degradation via the proteasome, alter their cellular location, affect their activity, and promote or prevent protein interactions. Removal of ubiquitin from a substrate protein occurs via deconjugating enzymes, of which there are nearly 100 known enzymes with various linkage specificities. This product consists of a full-length human, mature ubiquitin polypeptide (amino acids 1-76), expressed in *E. coli* with a c-terminal warhead (Aldehyde). Ubiquitin-Aldehyde is a potent, irreversible, and specific inhibitor of deubiquitinating enzymes (DUBs) based on a C-terminal electrophilic Aldehyde group. Ub-Aldehyde can be used for activity profiling experiments and determining DUB inhibitor specificity. It targets three of the four major DUB families: UCH (Ubiquitin c-terminal hydrolases), USP (Ubiquitin Specific Proteases), OTU (Ovarian Tumor Proteases), and MJD (Machado-Josephin domain proteases) while JAMM metalloproteases are not inhibited. Reaction conditions will need to be optimized for each specific application. We recommend an initial Recombinant Human Ubiquitin-Aldehyde concentration of 1-5 μ M.



Product Information

Quantity: 50 μ g **Molecular Weight:** 8.6 kDa

Concentration: 350 μ M, 3.1 mg/mL

Purity: >97% by LCMS

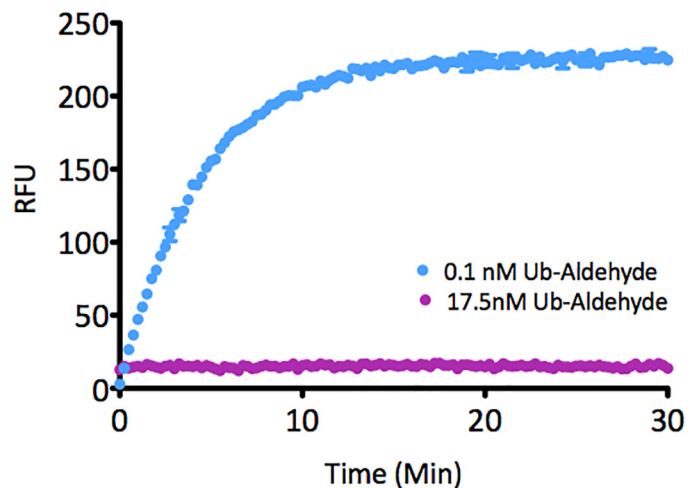
Storage Buffer: 50mM NaOAc pH 5.0

Storage: -80C, Avoid multiple freeze / thaw

Usage: Typical experimental concentration 1-5 μ M.

Quality Control and Performance Data

UCHL3 + Ub-AMC + Ubiquitin-Aldehyde



Kinetic Activity. UCHL3 (SBB-DE0023) activity with Ubiquitin-AMC (SBB-PS0043) measured in the presence of 17.5 nM and 0.1 nM Ubiquitin Aldehyde.

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References

- 1) Borodovsky et al. 2001, 20, 5187.
 - 2) Xu et al. RSC Adv 2016, 6, 47926.
 - 3) Tong, X. et al. (2012) J. Biol. Chem. 287:25280.
Galardy et al. Methods in Enzymology 2005, 399, 120.
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