

Recombinant Full Length Human Ubiquitin Protein, Vinyl Sulfone Labeled

Cat. No. Ubiquitin-16HFL **Lot. No.** (See product label)

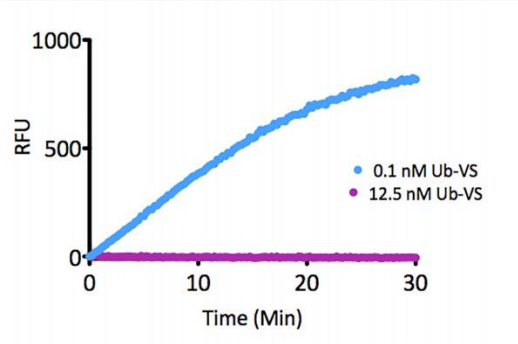
SPECIFICATION

Product Overview	This product consists of a full-length human, mature ubiquitin polypeptide (amino acids 1-76), expressed in E. coli with a c-terminal warhead (Vinyl Sulfone).
Species	Human
Source	E.coli
ProteinLength	1-76aa
Description	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. Ubiquitin-Vinyl Sulfone is a potent, irreversible, and specific inhibitor of deubiquitinating enzymes (DUBs) based on a C-terminal electrophilic Vinyl Sulfone group. 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.
Conjugation/Label	Vinyl Sulfone

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Molecular Mass	8.6 kDa																								
Purity	>97% by LCMS																								
Usage	Reaction conditions will need to be optimized for each specific application. We recommend an initial Recombinant Human Ubiquitin Vinyl Sulfone concentration of 1-5 μ M.																								
Applications	Ub-Vinyl Sulfone can be used for activity profiling experiments and determining DUB inhibitor specificity.																								
Notes	For Research Use Only, Not For Use In Humans.																								
Storage	Store at -80 centigrade after product arrival. Avoid multiple freeze/thaws. It is recommended to make multiple aliquots after the first thaw.																								
Storage Buffer	50mM MES pH 6.0, 100mM NaCl																								
Concentration	250uM, 2.15 mg/mL																								
Substrate Properties	Protein-Based Substrate. Typical experimental concentration 1-5 μ M.																								
Kinetic Activity	<table border="1"><caption>Approximate data points from the Kinetic Activity graph</caption><thead><tr><th>Time (Min)</th><th>0.1 nM Ub-VS (RFU)</th><th>12.5 nM Ub-VS (RFU)</th></tr></thead><tbody><tr><td>0</td><td>0</td><td>0</td></tr><tr><td>5</td><td>150</td><td>0</td></tr><tr><td>10</td><td>350</td><td>0</td></tr><tr><td>15</td><td>550</td><td>0</td></tr><tr><td>20</td><td>700</td><td>0</td></tr><tr><td>25</td><td>800</td><td>0</td></tr><tr><td>30</td><td>850</td><td>0</td></tr></tbody></table>	Time (Min)	0.1 nM Ub-VS (RFU)	12.5 nM Ub-VS (RFU)	0	0	0	5	150	0	10	350	0	15	550	0	20	700	0	25	800	0	30	850	0
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UCHL3 activity with Ubiquitin-AMC measured in the presence of 12.5 nM and 0.1 nM Ubiquitin Vinyl Sulfone.

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