

Recombinant Full Length Human Ubiquitin Protein, HA tagged, Vinyl Pentyl Sulfone Labeled

Cat. No. Ubiquitin-11HFL **Lot. No.** (See product label)

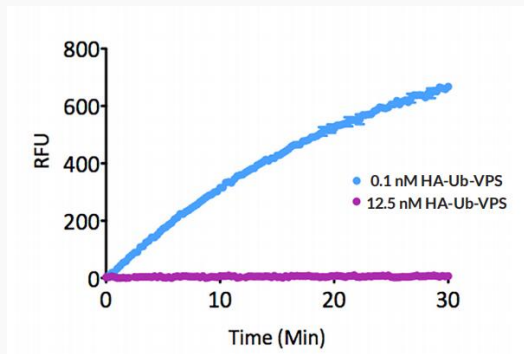
SPECIFICATION

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 Pentyl Sulfone) and an N-terminal HA-Tag.
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. 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. HA-Ubiquitin-Vinyl Pentyl-Sulfone is a potent, irreversible, and specific inhibitor of deubiquitinating enzymes (DUBs) based on a C-terminal electrophilic Vinyl Pentyl 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.
Tag	HA

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Conjugation/Label	Vinyl Pentyl Sulfone																								
Molecular Mass	10.1 kDa																								
Purity	>97% by LCMS																								
Usage	Reaction conditions will need to be optimized for each application. We recommend an initial HA-Ubiquitin-VPS concentration of 1-5 μ M.																								
Applications	HA-Ub-Vinyl Pentyl Sulfone can be used for activity profiling experiments and using the HA-Tag conveniently for Immunoprecipitations in search for new or novel enzymes reacting with the c-terminal warhead.																								
Notes	For Research Use Only, Not For Use In Humans.																								
Storage	At -80 centigrade, Avoid multiple freeze/thaw.																								
Storage Buffer	50mM MES pH 6.0, 100mM NaCl																								
Concentration	220 μ M, 2.2 mg/mL																								
Kinetic Activity	<div><p>The graph displays the kinetic activity of HA-Ub-VPS at two concentrations. The x-axis represents Time in minutes (0 to 30), and the y-axis represents Relative Fluorescence Units (RFU) (0 to 800). The 0.1 nM HA-Ub-VPS (blue line) shows a significant increase in RFU over time, while the 12.5 nM HA-Ub-VPS (purple line) shows no activity.</p><table><caption>Estimated data points from the Kinetic Activity graph</caption><thead><tr><th>Time (Min)</th><th>0.1 nM HA-Ub-VPS (RFU)</th><th>12.5 nM HA-Ub-VPS (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>300</td><td>0</td></tr><tr><td>15</td><td>450</td><td>0</td></tr><tr><td>20</td><td>550</td><td>0</td></tr><tr><td>25</td><td>620</td><td>0</td></tr><tr><td>30</td><td>650</td><td>0</td></tr></tbody></table></div>	Time (Min)	0.1 nM HA-Ub-VPS (RFU)	12.5 nM HA-Ub-VPS (RFU)	0	0	0	5	150	0	10	300	0	15	450	0	20	550	0	25	620	0	30	650	0
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UCHL3 activity with Ubiquitin-AMC measured in the presence of 15.0 nM and 0.1 nM HA-Ubiquitin Vinyl Pentyl Sulfone.

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