Human recombinant ubiquitin K48
Cat. # SI207

Background

Numerous biological processes are regulated by the posttranslational modification of proteins by ubiquitination. Different polyubiquitin chain linkages direct substrates toward distinct cellular pathways, with K63 ubiquitination playing an important role in proteasome-mediated substrate degradation. K63 also acts as a seed for K48/K63 branched ubiquitin chains. There are eight ubiquitin linkages, with K48 and K63 linkages being the most abundant, accounting for approximately 80% of the total linkages in mammalian cells. K48-linked chains primarily signal proteins for degradation by the proteasome and play a key role in maintaining protein homeostasis and regulating signaling turnover.

This tag-free recombinant form of human ubiquitin is engineered to have all available lysines mutated to arginines, except for the one at position 48. This molecule, therefore, can form only polyubiquitin chains of the K48 linkage type.

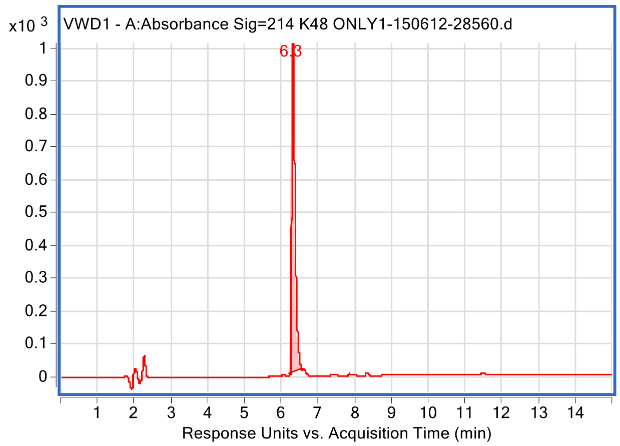
Application(s)

For use in conjunction with the E3LITE Customizable Ligase Assay and E2 Profiling Kit to investigate conjugation/ligation enzyme activity and/or drug discovery. It is also used for conventional ubiquitin pathway research.

Product Specifications

Tag	None
Purity	$\geq$ 95% by RP-HPLC
Molecular Weight	8,732.9 Da
Quantity	1 mg
Species	Human
Expression System	*E. Coli*
Physical State	Liquid
Buffer	50 mM Tris, pH 7.5, 0.15 M NaCl, 10% glycerol
Solubility	>30mg/ml
Stability & Storage	Over 1 year at -80^{o} C. Avoid repeated freeze/thaw cycles

Product QC



RP-HPLC

All products are for research use only • Not intended for human or animal diagnostic or therapeutic uses

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References

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