

Background

Polyubiquitination of target proteins through lysine 48 (K48) is the most thoroughly studied of the various ubiquitin chain linkages and was once considered the hallmark of ubiquitination. It is now clear that many, if not all, polyubiquitin chain topologies play distinct and important roles in regulating cellular processes. Nevertheless, K48-linked polyubiquitination remains the primary signal for proteasome-mediated degradation.

K48-linked di-ubiquitin chains are generated enzymatically using the E2-25K enzyme, which links wild-type ubiquitin molecules through lysine 48. The most distal ubiquitin in the chain contains an arginine substitution at position 48, preventing further elongation and limiting chain length.

These chains serve as valuable substrates for identifying and characterizing deubiquitinating enzymes (DUBs) that specifically cleave K48 linkages. They are also useful for structural and binding studies involving ubiquitin chain recognition by ubiquitin-associated domains (UBA) or ubiquitin-interacting motifs (UIMs).

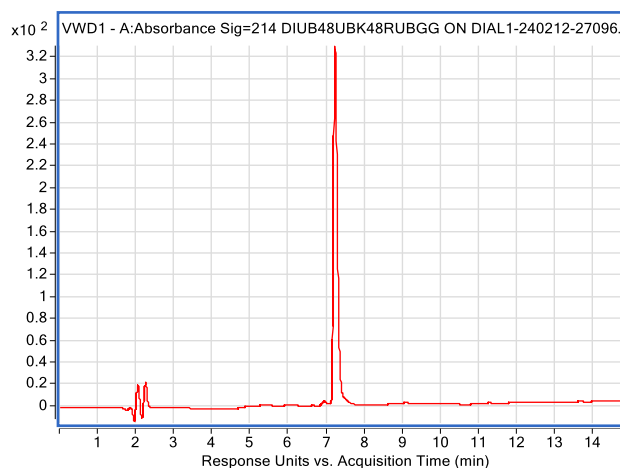
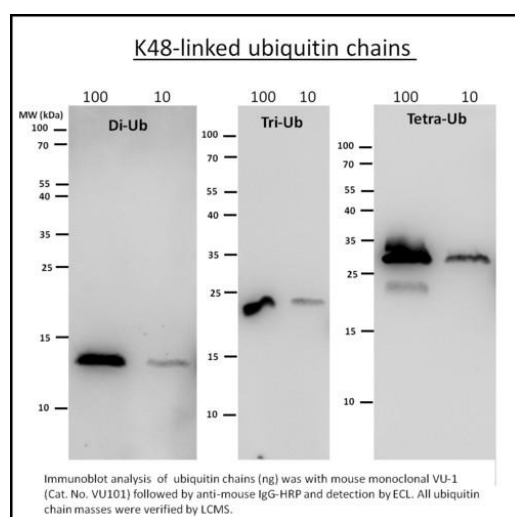
Application(s)

Investigation of DUB linkage specificity

Product Specifications

Tag	None
Purity	≥ 95% by RP-HPLC Western blot analysis
Molecular Weight	17139.7 Da
Quantity	100 µg
Species	Human
Source	<i>E. coli</i>
Physical State	Liquid.
Buffer	20 mM Tris-HCl, pH 7.5, 150 mM NaCl, 1 mM EDTA
Solubility	> 1mg/mL
Storage	-80°C. Avoid repeated freeze/thaw cycles

Product QC



RP-HPLC

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K48-linked di-ubiquitin (Ub2)

Cat. # SI4802

References

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