K33-linked di-ubiquitin (Ub2)

Cat. # SI3302

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Background

Several cellular processes are regulated by protein ubiquitination through the attachment of structurally and functionally distinct ubiquitin chains. K33-linked chains are an atypical linkage type that can adopt multiple conformations, contributing to their functional diversity. They have been identified on AMPK-related kinases and components of T cell receptor signaling.

K33-linked diubiquitin (Ub2) consists of two ubiquitin molecules joined by a native isopeptide bond between the C-terminal glycine of the distal ubiquitin and the ε-amino group of lysine 33 on the proximal ubiquitin. This product is typically generated using chemical ligation.

It is a valuable substrate for identifying and characterizing deubiquitinating enzymes (DUBs) that cleave the K33 linkage and for structural and binding studies involving recognition of ubiquitin chains by ubiquitin-associated domains (UBA) or ubiquitin-interacting motifs (UIMs).

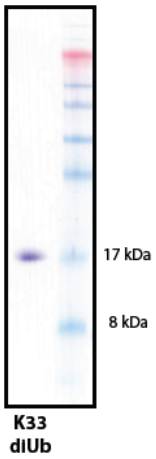
Application(s)

Investigation of DUB linkage specificity.

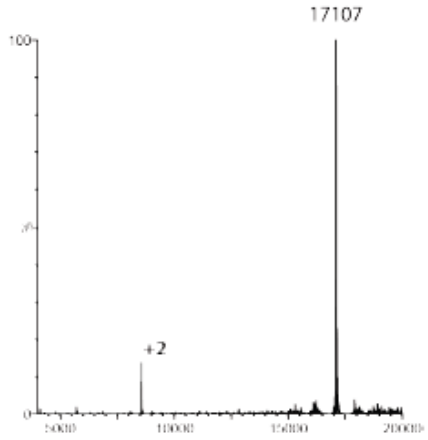
Product Specifications

Tag	None
Purity	≥ 95% by RP-HPLC
Molecular Weight	17108 Da by MS (calculated 17112 Da)
Quantity	25 µg
Species	Human
Expression System	*E. Coli*
Physical State	Liquid at 0.5 mg/ml
Buffer	20 mM Tris-HCl, pH 7.5, 0.15 M NaCl, 1 mM EDTA
Stability & Storage	-80° C. Avoid repeated freeze/thaw cycles

Product QC



SDS-PAGE Analysis



Mass Spectrum

References

1. Kristariyanto YA., et al., Mol Cell. 2015;58(1):83-94.
2. Al-Hakim A.K., et al., Biochem. J. 2008; 411:249–260.